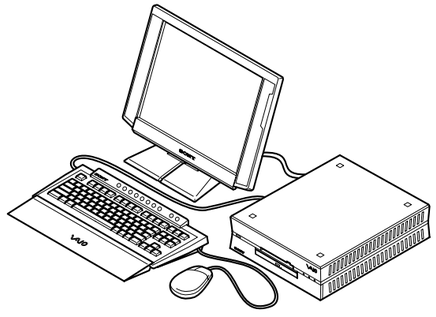
PCV-L630 (US)

PCV-L630 (US)

PCV-L630

SERVICE MANUAL

US Model



S400

MEMORY STICK

Spcifications

9-928-365-11

Sony Corporation
Information Technology Company

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2000E1605-1

SONY

PERSONAL COMPUTER VAIO

SONY

9-928-365-11

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CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

Service and Inspection Precautions

1. Obey precautionary markings and instructions

Labels and stamps on the cabinet, chassis, and components identify areas requiring special precautions. Be sure to observe these precautions, as well as all precautions listed in the operating manual and other associated documents.

2. Use designated parts only

The set's components possess important safety characteristics, such as noncombustibility and the ability to tolerate large voltages. Be sure that replacement parts possess the same safety characteristics as the originals. Also remember that the (⚠ mark, which appears in circuit diagrams and parts lists, denotes components that have particularly important safety functions; be extra sure to use only the designated components.

3. Always follow the original design when mounting parts and routing wires

The original layout includes various safety features, such as inclusion of insulating materials (tubes and tape) and the mounting of parts above the printer board. In addition, internal wiring has been routed and clamped so as to keep it away from hot or high-voltage parts. When mounting parts or routing wires. therefore, be sure to duplicate the original layout.

4. Inspect after completing service

After servicing, inspect to make sure that all screws, components, and wiring have been returned to their original condition. Also check the area around the repair location to ensure that repair work has caused no damage, and confirm safety.

5. When replacing chip components...

Never reuse components. Also remember that the negative side of tantalum capacitors is easily damaged by heat.

6. When handling flexible print boards...

- The temperature of the soldering-iron tip should be about 270C.
- Do not apply the tip more than three times to the same pattern.
- Handle patterns with care; never apply force.

Caution: Remember that hard disk drives are easily damaged by vibration. Always handle with care.

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Reproduced from User Guide [4-646-001-01]

Section 1-1: Read Me First

SONY

Read Me First

PCV-L630

Thank you for purchasing your new Sony computer. Many common questions about your computer are answered in this manual. For the most recent information, please refer to the online version of *Read Me First*. You can access all of the electronic documentation from the Windows® Start menu by selecting Programs, and then VAIO Documentation. Check the Sony Support Web site at www.sony.com/pcsupport for the latest updates and information. For a VAIO demonstration, press the Help key (P6). To reprogram this key to launch Help, see "Reprogramming Your Programmable Power Keys" on page 4.

Frequently Asked Questions (FAQs)

Q: *How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?*

A: The Application Recovery CDs allow you to reinstall individual applications and device drivers if they are corrupted or accidentally erased. Reinstalling an individual device driver or software title may correct a problem you are experiencing with your computer, and you may not need to recover the entire contents of your hard drive. If you do need to reinstall all the software titles that shipped with your computer, use the System Recovery CD(s).

You must be in Windows to run the Application Recovery CD(s). The application will not run from DOS. If you have any questions on using the Application Recovery CD(s), contact Sony Customer Support.

To use the Application Recovery CD(s)

1. Turn on your computer. If your computer is already on, close all applications.
2. When the Windows desktop appears, insert the Sony Application Recovery CD in the DVD-ROM drive. The Application Recovery utility loads automatically.
3. When the Application Recovery menu appears, follow the on-screen instructions to complete the recovery process.

Your system may include one or two Application Recovery CDs. If you have two Application Recovery CDs, insert the first CD to run the Application Recovery program. You may be prompted to insert the second CD, depending on the application you wish to restore.

Q: *How do I change the parallel port type to ECP, EPP, or bi-directional?*
A: You can change the parallel port type using the System Setup utility. To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays, press the Delete key on your keyboard. Select "Chipset Features Setup" from the CMOS Setup Utility screen. Use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), ECP, EPP and ECP+EPP options using the Page Up (PU) or Page Down (PD) buttons. When the desired setting displays, press the Escape key to return to the CMOS Setup Utility screen. Select the F10 key to Save and Exit. Select Yes (Y) to save the CMOS settings and exit. Press the Enter key. The system automatically starts with the new settings.

Q: *Why isn't the DVD-ROM drive reading a CD?*
A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: *How do I set up faxing capability in Windows® 98 Second Edition?*
A: Windows 98 does not provide a built-in fax utility. Sony has included the Symantec® WinFax™ Basic Edition for your faxing needs. To set up WinFax Basic software, click the Start button, point to Programs, and select Configure WinFax Basic Edition. Follow the on-screen instructions to configure the fax utility.

Q: *How do I change the video resolution of my display?*
A: From the Start menu, select Settings, and then click Control Panel. Click the Display icon. Select the Settings tab. Move the slider under Screen area to change the resolution.

Q: *Why does Windows lock up during shut down?*
A: Windows may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows 98 Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?
A: Your system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules.

Q: *Why is there no sound in any application?*

A: There are several independent controls for your system volume.

- ❑ There is a volume control on the right side of your LCD display and a volume control in the Windows task tray.
- ❑ In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control.
- ❑ If you are using headphones, adjust the volume control on the front of the system.

Q: *How do I turn off my Information LED after I have read my e-mail?*

A: To turn off the Information LED, click the icon in the Windows task tray.

Q: *Why is the Play button in my Microsoft CD Player grayed out when I try to play a music CD?*

A: When you insert a music CD, the Sony Media Bar™ application software automatically launches to play your CD. When the Sony Media Bar software is running, the Microsoft CD Player does not have access to the CD. If the Sony Media Bar is not visible, move your cursor to the top of the screen to bring forward the hidden Media Bar. If you do not hear any music, check all your volume controls.

Q*: How do I change my modem to rotary or Touch-Tone dialing?*

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q*: Why is there unusual activity on my floppy disk drive?*

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Microsoft Word 2000 will not be recovered. Use the supplied Word 2000 CD-ROM to recover this application.

Reprogramming Your Programmable Power Keys

Your Programmable Power Keys (PPK) come preprogrammed to launch designated applications. To change the applications launched by any of the PPK, see VAIO Action Setup Help. To access the Help file, from the Start menu, point to Programs / VAIO Action Setup / VAIO Action Setup Help.

Copying Data From Memory Stick® Media

When copying from one Memory Stick media to another Memory Stick media when the media are of different memory capacity, use the drag and drop method to copy data. Do not use the Copy Disk function of Windows. The Copy Disk function will result in the loss of media memory.

Using the AutoAlert™ E-mail Notification System

Your VAIO Slimtop LCD computer has an Information LED on the LCD display which can be set up to automatically alert you if you have new e-mail. You can also set up the internal timer on your computer to wake up automatically and download e-mail at preset times each day.

You can use the timer to send and receive mail using Microsoft Outlook Express. If you use Outlook Express, the LED indicator lights when you receive new e-mail.

To use these features, you must first designate your Internet Service Provider (ISP) and the e-mail software you wish to use. The “Internet” (P1) and “Mail” (P2) buttons on your keyboard are preprogrammed to run Microsoft Internet Explorer and Microsoft Outlook Express, respectively. If you have not set up your Internet or Mail connections, pressing P1 or P2 launches the Internet Connection Wizard. The wizard helps you set up your Internet account and e-mail software step by step. Refer to the information provided by your ISP or your e-mail software for more information.

Once you have set up your Internet account and Outlook, you can use the AutoAlert E-mail Notification System and internal timer features. For more information, see “Internal Timer” and “AutoAlert™ E-mail Notification System” in the *VAIO Slimtop™ LCD Computer User Guide*.

Using the Power Button on the System and on the Keyboard

The power button on the keyboard performs a system shutdown, but does not give you the options available when you use the Windows Shutdown menu. Shutting down from the Windows Shutdown menu allows you to choose options such as Standby, Restart, and Restart in MS-DOS mode.

✍ Shutting down your computer improperly may result in loss of data.

In the event your system has "locked up" or crashed, press and hold the power button on the system for several seconds to force your system to power off. You may need to repeat this procedure.

To Resume from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1 Right-click the My Computer icon on the desktop, and then select Properties.

2 Click the Device Manager tab.

3 Select Refresh, and then click OK.

The printer should now function properly.

Applications That Use the TWAIN Driver

Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.

PCI Add-in Board Size

Your computer can accommodate PCI add-in boards up to 6.6 inches in length.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 SDRAM modules (gold lead contacts). For more information on VAIO Computer compatible memory, call Sony Customer Support at 1-888-4SONYPC (1-888-476-6972).

Sony computer supplies, accessories and peripherals can be purchased from your Sony-authorized dealer or by contacting Sony at www.sony.com/accessories.

For Answers to Your Software Questions

Adobe Systems Incorporated	206-628-5737 (M-F, 6 AM-5 PM Pacific Time)
America Online	800-827-3338 (7 days a week, 6 AM - 2 PM Eastern Time)
AT&T	800-400-1447 (7 days a week, 24 hours a day)
CompuServe Interactive Services	800-848-8990 (M-F, 8 AM - 1 AM Eastern Time, S-S 10 AM - 10 PM Eastern Time)
EarthLink Network, Inc.	800-395-8410 (7 days a week, 24 hours a day)
GTE Internet	800-927-3000 (7 days a week, 24 hours a day)
Intuit Inc.	900-555-4688 (7 days a week, 24 hours a day)
MindSpring Enterprises, Inc.	800-719-4660
Network Associates, Inc.	408-988-3832 (M-F 9AM - 5PM Central Time)
Prodigy Communications Corporation	800-PRODIGY (7 AM - 3 AM Eastern Time)
Sonic Foundry	608-256-5555 (M-F, 8 AM - 7 PM Central Time)
Symantec Corporation	800-798-0850

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Printed in USA 4-646-002-01

SONY

VAIO Slimtop™ LCD Computer User Guide

PCV-L630

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For questions regarding your product or for the Sony Service Center nearest you, call 1-888-476-6972.

The number below is for FCC related matters only.

Regulatory Information

Declaration of Conformity

Trade Name: SONY
Model No.: PCV-L630
Responsible Party:
Sony Electronics Inc.
Address:
1 Sony Drive
Park Ridge, NJ 07656
Telephone No: 201-930-6972

This device complies with Part 15 of FCC Rules. Operation is subject to the two following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Owner's Record

The model number and serial number are located on the back of your Sony computer. Record the model and serial numbers in the space provided here. Refer to these numbers when you call your Sony Service Center.

Model Number:_____

Serial Number:_____

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Features

For a complete description of the specifications of your Sony computer, see "Specifications" on page 40.

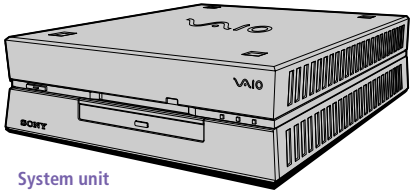
- **i.LINK® (IEEE-1394):** Two built-in i.LINK ports provide you with front and rear digital connection capability. The i.LINK name and logo identify a digital interface (IEEE-1394) for high speed communication.
- **Exceptional performance:** Your computer includes a fast Intel® processor and a V.90-compatible data/fax modem.*
- **Ergo-Angle™ Multimedia LCD display:** With its exclusive dual-hinge pedestal, this 15" XGA TFT display provides twice the flexibility of other LCDs. Select the perfect viewing angle and enjoy the built-in Harman/Kardon® stereo speakers.
- **AutoAlert™ E-mail Notification System:** Custom software automatically downloads e-mail on a pre-set schedule via Microsoft® Outlook® Express. A light on the LCD display instantly lets you know when new mail is received.
- **VAIO Smart convertible keyboard:** The innovative palm rest converts to a keyboard cover for a sleek look when not in use. Six Programmable Power Keys let you launch any application with the push of a button; dual-sided mouse connections for left- or right-hand use.
- **Sony Memory Stick® media slot:** The next generation of digital media, smaller than a stick of gum. Easily delivers information from one **Memory Stick**-equipped electronic device to another, so you can transfer images, sounds, data and text between cameras, computers, and more.

* Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

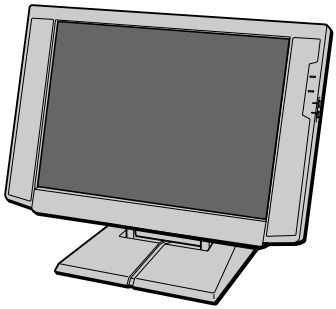
- **Compact components**: Enjoy the small footprint and versatile setup options available by positioning the components in an arrangement of your choice.
- **Sony audio and video quality**: High-fidelity 3D audio system and high-powered 3D graphics (AGP) enable you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- **Preinstalled software titles**: All the software on your computer is preinstalled, configured, and ready for you to use right out of the box.
- **Microsoft® Windows® 98 Second Edition operating system**: Your system includes the latest operating system from Microsoft.
- **Communications**: Access popular online services, browse the Internet, send faxes, and more.

Unpacking Your Computer

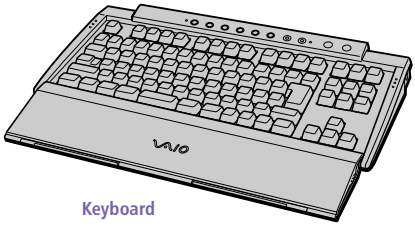
Computer and Supplied Accessories



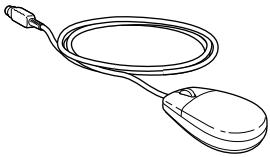
System unit



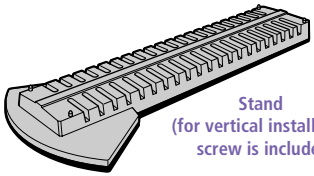
LCD



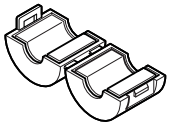
Keyboard



Mouse

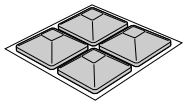


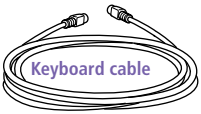
Stand
(for vertical installation;
screw is included)

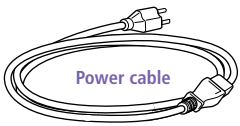


Ferrite core

Spacers







Manuals

- *Read Me First* contains last-minute supplementary information and software support numbers.
- The *VAIO Slimtop™ LCD Computer User Guide* (this manual) contains features and specifications of your computer. It also includes information on the applications included with your system and how to contact software vendors, get started with your computer, and solve common problems.
- The *VAIO® Consumer Information Guide* contains safety and regulatory information, ergonomic considerations, information on help resources, and your computer's limited warranty statement.
- The Microsoft® Windows®98 Second Edition *Getting Started* manual explains how to use the basic features of the Windows® operating system.

Recovery CDs

- System Recovery CD(s) – Enables you to reinstall software that shipped with your computer if it is corrupted or accidentally erased. For more information, see "Using the System Recovery CD(s)" on page 26.
- Application Recovery CD(s) – Allows you to reinstall individual applications or device drivers if they are corrupted or accidentally erased. For more information, see "Using the Application Recovery CD(s)" on page 28.

Other

- Setting up your VAIO Slimtop LCD Computer (poster)
- Packet containing special product offers

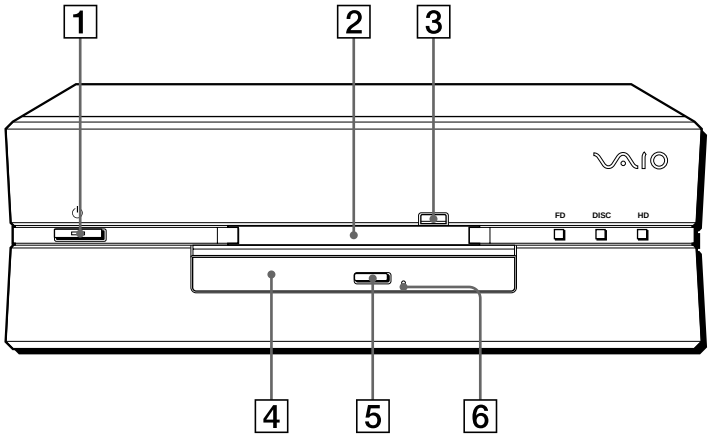
Software CDs

- Microsoft® Word 2000

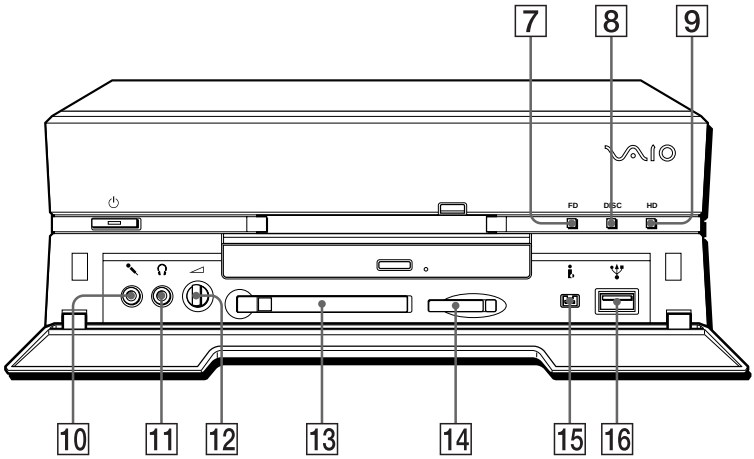
Setting Up Your VAIO Slimtop™ LCD Computer

Locating Controls and Connectors

Front Panel



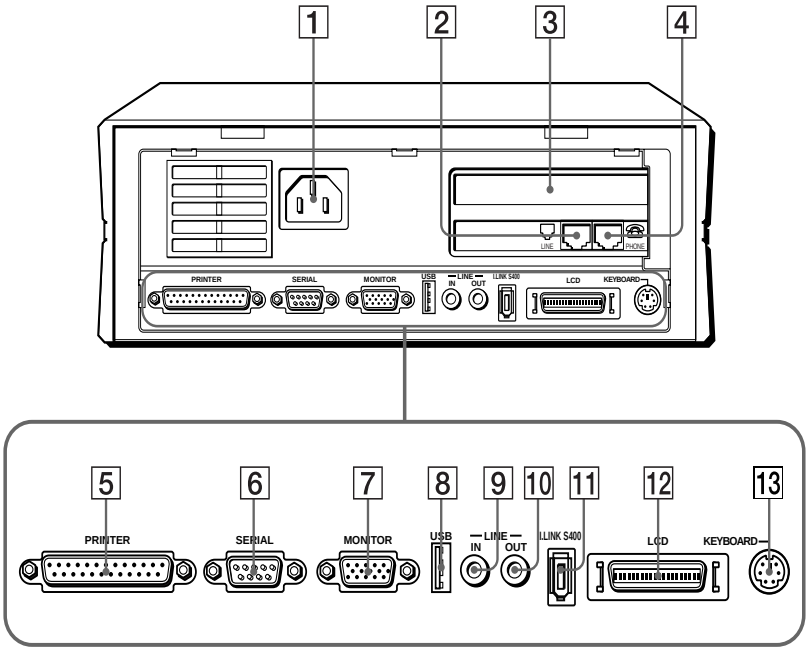
1	⏻ Power switch and indicator light Turns on / off the computer and the display. The indicator light is green while the power is on and amber when the computer is in standby mode.
2	Floppy disk drive Reads / writes data from / to a 3.5-inch floppy disk.
3	Floppy disk eject button Ejects the floppy disk.
4	DVD-ROM drive Reads data from a DVD-ROM / CD-ROM.
5	DVD-ROM/CD-ROM eject button Ejects a DVD-ROM / CD-ROM.
6	Manual eject hole If the DVD-ROM / CD-ROM does not come out when you press the DVD-ROM / CD-ROM eject button, insert a thin, pointed object into this hole to eject the disc manually.



7	FD (Floppy disk drive) access indicator light Lights in green while reading / writing data from / to a floppy disk.
8	Disc (DVD-ROM drive) access indicator light Lights in amber while reading data from a DVD-ROM / CD-ROM.
9	HD (drive) access indicator light Lights in green while reading / writing data from / to the hard disk.
10	MIC (Microphone) connector* Connects a microphone (not supplied).
11	PHONES (Headphones) connector* Connects headphones (not supplied).
12	VOLUME control Adjusts the volume of the headphones connected to the PHONES connector. Users should note that this does not control the volume of the integrated LCD speakers.
13	PC CARD slot A PC Card (also called a PCMCIA card) can be installed in this slot. PC cards enable you to add functionality to your system.
14	**MEMORY STICK** media slot Insert a Sony **Memory Stick**® card into this slot. See page 18 for details on using **Memory Stick** media.
15	i.LINK (4-pin) Connects a digital device such as a Sony Digital Handycam® Camcorder.
16	USB (Universal Serial Bus) connector Connects a USB device.

* See "Using a Headphone or Microphone" on page 10 for important information about connecting a microphone and headphone.

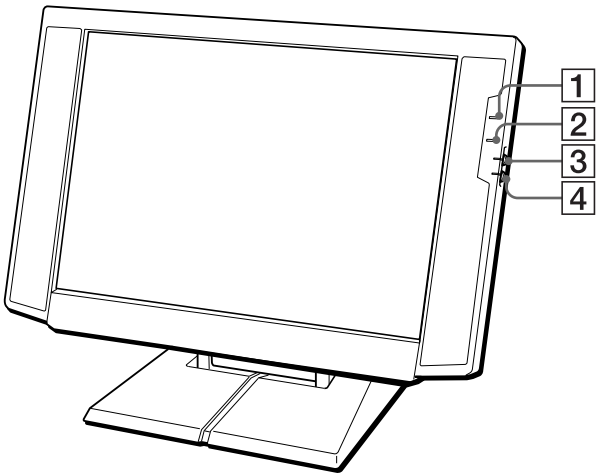
Rear Panel



1	AC INPUT connector Connects the supplied power cord.
2	LINE jack Connects a phone cable to the wall jack.
3	EMPTY PCI SLOT (FILLED WITH ETHERNET CARD ON CUSTOM MODELS) For a PCI Add-On Card (not supplied).
4	TELEPHONE jack Connects the phone to the computer.
5	PRINTER connector Connects a parallel device, such as a printer or scanner.
6	SERIAL connector Connects a serial device, such as a digital still camera.
7	MONITOR connector Connects a standard CRT display.
8	USB (Universal Serial Bus) connector Connects a USB device.
9	LINE IN connector Connects an audio device.

10	LINE OUT connector Connects an audio device or an active speaker.
11	i.LINK (6-pin) Connects a digital device such as a Sony Digital Handycam® Camcorder.
12	LCD MONITOR connector Connects the LCD that comes with the VAIO Slimtop LCD computer. Note: Do not connect any display to this connector other than the LCD that is supplied with this system.
13	KEYBOARD connector Connects a keyboard.

LCD



1	⏻ Power indicator light Light is green while the power is on. When the computer enters the standby mode, this indicator light turns amber.
2	Information LED Light turns red to alert the user to activities, such as the arrival of e-mail. See “AutoAlert E-mail Notification System” on page 15.
3	☼ Brightness control Adjusts the brightness of the screen.
4	◿ Volume control Adjusts the volume of the integrated speakers on the LCD display.

Using the Wheel Mouse

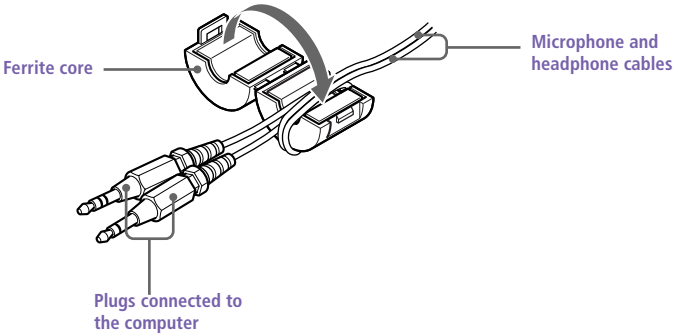
For information about the Wheel Mouse that connects to either side of your keyboard, see MouseWare Help. To access MouseWare Help, from the Start menu, point to Programs, MouseWare, and then click MouseWare Help.

To set up the mouse for left-handed use:

1. Click the My Computer icon on your desktop.
2. Click Control Panel, and then click Mouse. The Mouse Properties dialog box appears.
3. In the Quick Setup tab, click Device Setup.
4. In the Device Setup Wizard dialog box, click Next.
5. Select the radio button next to “Left side of the keyboard.”
6. Click Next three times, and then click Finish.
7. Click Apply.

Using a Headphone or Microphone

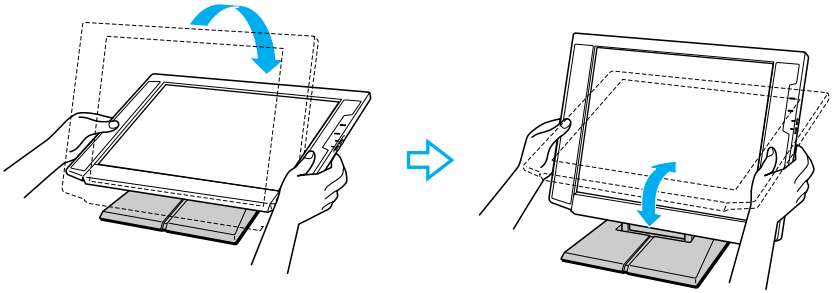
When you connect a microphone or headphone to your computer, attaching a ferrite core will reduce electrical interference. Attach the (supplied) ferrite core at the end of the headphone or microphone cable closest to the computer. Wrap the cable through the center of the ferrite core. The following illustration shows how to attach the ferrite core when you are using both a headphone and a microphone.



The LCD and keyboard cables already include a ferrite core. Do not remove the ferrite core from these cables.

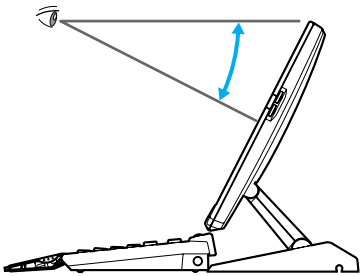
To adjust the height and viewing angle of the display

Holding both sides of the display, push the display panel out and up, and then adjust the viewing angle.



The LCD display is designed to maintain the best ergonomic viewing angle.

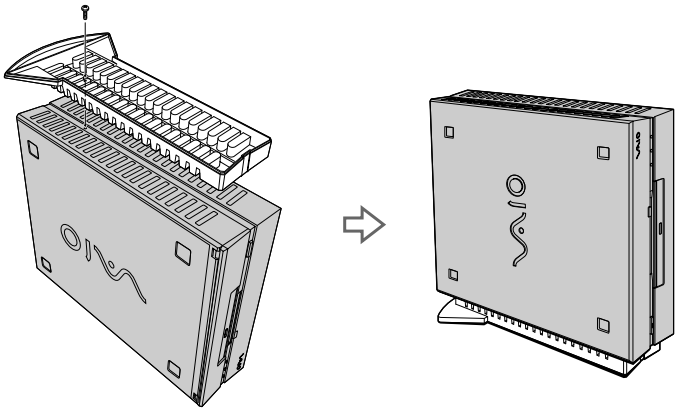
Set the display height so that it does not touch the keyboard, and adjust the viewing angle approximately 27 degrees from eye level to the center of the screen.



Attaching the Stand to the System Unit

The main system unit can be oriented horizontally or vertically. If you place the system in a vertical position, you must attach the supplied stand to ensure stability.

1. Place the system unit on its right side, with the front of the system facing forward.
2. Insert the grooved side of the stand into the ventilation holes of the system so that the two screw holes are aligned and the stand's fins are at the rear of the unit.
3. Secure the stand to the unit with the supplied screw.



The stand keeps the system cool by allowing air to flow under it. If you choose to place the system unit in a vertical position, it is important to use the stand and to place the system unit on its left side, as in the illustration above; otherwise, the system may overheat.

Registering Your Computer

Take advantage of Sony's commitment to quality customer support and receive these benefits by registering your computer:

- **Sony Customer Support**—Talk to a Support Representative to troubleshoot problems you may be having with your computer.
- **Limited warranty**—Protect your investment. See "Limited Warranty Statement" in the *VAIO® Consumer Information Guide* for details.

  You must register your computer to extend the warranty from the initial 90-day warranty period to one year from the original date of purchase.

- **Express Service**—Provides a fast and direct return of your VAIO Slimtop™ LCD Computer to Sony for service of your computer.

If you did not already register when you first turned on your computer, follow these steps to use the computer online registration service.

1. Click the registration icon on the VAIO desktop.
2. Enter the information requested on the first online registration form. Press the Tab key to move from box to box.
3. Click the Next button to advance to the next form.
4. Complete the remaining forms by clicking the Next button each time you complete a form.

   The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number or a local number.

   You may sign up for Internet access with a Sony preferred Internet Service Provider.

VAIO Action Setup

VAIO Action Setup manages the settings for your computer's Programmable Power Keys (PPK), **Memory Stick®** media, i.LINK interface, and internal timer. An overview of each of these functions is provided below. For more information on changing the settings using VAIO Action Setup, see the online VAIO Action Setup help files. To access the help files, from the Start menu, point to Programs / VAIO Action Setup / VAIO Action Setup Help.

Programmable Power Keys

Your Sony computer comes with technology that allows you to get to your favorite applications easily. Each Programmable Power Key (PPK) on your VAIO Smart convertible keyboard comes programmed to launch a preset application with a single press of the key. If you wish, you can use the VAIO Action Setup software to change the Programmable Power Keys' preset functions.

The Programmable Power Keys are located at the top of your keyboard, and are numbered P1 through P6. The keys work even when the computer is turned off. Pressing one of these keys turns on the computer and launches the preset application.

The six Programmable Power Keys come to you preprogrammed to perform the functions listed in the table below.

Key	*Function*
P1 (INTERNET)	Starts Microsoft® Internet Explorer for Windows® 98.
P2 (MAIL)	Starts Microsoft® Outlook® Express
P3 (WORK)	Starts Microsoft® Word
P4 (FINANCE)	Starts Intuit® Quicken® Basic 2000.
P5 (SETUP)	Starts PPK Setup.
P6 (HELP)	Opens a menu of help options.

Memory Stick

You can use VAIO Action Setup to preset your computer to automatically launch an application when you insert a **Memory Stick**. For more information on **Memory Stick** media, see "Using **Memory Stick®** Media" on page 18.

Internal Timer

The VAIO Action Setup software allows you to set your computer's internal timer to launch certain applications automatically. The timer can start applications even when the power is off.

Some software applications take longer than others to launch. It is advisable to confirm in advance the amount of time your selected application takes to start.

AutoAlert E-mail Notification System

VAIO Action Setup also enables you to set up your computer to notify you with an Information LED when new mail arrives in your e-mail mailbox. The Information LED turns red to indicate that new e-mail has arrived. For this AutoAlert E-mail Notification System to work, you must use Microsoft® Outlook® Express as your default e-mail software, and you must have an Internet Service Provider with dial-up capabilities set up.

As an alternative, you can program your AutoAlert E-mail Notification System to set the Information LED to turn on when it has successfully completed the task of dialing up and connecting to receive mail. In this case, the Information LED turns on to indicate that your e-mail account has been accessed successfully, regardless of whether or not you have mail; this works with Microsoft Outlook Express.

The e-mail software you choose to use with PPK must be set as your default e-mail software.

See "LCD" on page 8 for an illustration showing the Information LED's location.

AutoAlert E-mail Notification System Software Restrictions

If you use software that uses a phone line

- The computer may not be able to disconnect the phone line due to communication and server conditions.
- Be sure to monitor the status of the software when running the AutoAlert E-mail Notification System, and manually disconnect the phone line if you notice a malfunction. Furthermore, when using the timer to start the software, it is advised that you set the computer to shut down or enter system standby mode after a certain length of time. This allows the computer to disconnect the phone line if the computer fails to disconnect the line normally.

If you are using the timer to download e-mail automatically

It is advisable to set up your e-mail software to redial automatically if it does not connect the first time. It is also advisable to set the e-mail software to disconnect the phone line automatically when all mail has been downloaded.

If you are using Microsoft® Outlook® Express

When using the AutoAlert E-mail Notification System with Microsoft Outlook Express, it is advisable to select the Dial automatically setting in your Microsoft Outlook Express software. If you have not chosen this setting and wish to do so, start Outlook Express, click Tools, and then select Options. Select the check box “Automatically dial when checking for new messages.” Click OK.

Changing the Window Design of Sony Software

To change the window design of Sony software

1. Click the Start button, point to Settings, and then click Control Panel.
2. Click UI Design Selector.
3. Click << or >> and select the desired design.
4. Click Apply.

The “UI Design Selector” window design changes. The window design for your Sony software will match the “UI Design Selector” window.

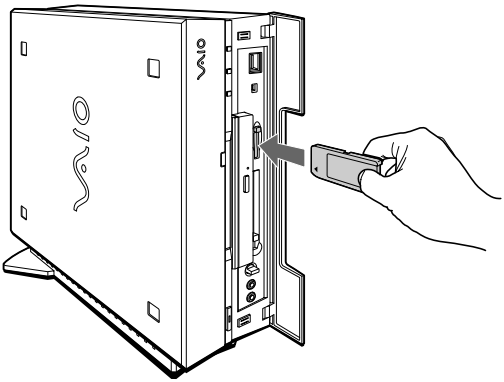
To try another selection, click << or >>. Then, click OK.

The UI Design Selector closes and the window design of your Sony software window design displays.

Note: You may use the feature with UI Design Selector-compatible software only.

Using the **Memory Stick**® Media

Your Sony computer is designed to support the new **Memory Stick** recording media. The **Memory Stick** media is a small, versatile device that allows you to share data between various types of Sony equipment.



When you use the card, your computer automatically launches Windows Explorer. This allows you to view the contents of the card.

If the image files are created by a Sony digital camera or camcorder, you do not need the following steps.

If you want to create a slide show that launches automatically when you insert a **Memory Stick**, follow these steps to transfer images from your hard drive to a **Memory Stick**.

1. Insert the **Memory Stick** into the appropriate slot.
2. Click the My Computer icon on the desktop.
3. Click the Removable Disk S: icon.
4. Create a new folder and name it “DCIM.”
5. Open the DCIM folder and create a new folder named “100MSDCF.”
6. Click the Start button, select VAIO, and then click PictureGear to launch the PictureGear application.
7. Select the digital images you want to save in your slide show.

8 From the PictureGear File menu, point to File Process, and then select Still Format Conversion.

9 Select **Memory Stick** as the Output Format.

10 Use the Browse button to select the DCIM / 100MSDCF folder on the Removable Disk (S:) drive.

11 Name the file. The file name must begin with DSC (DSC0xxxx). The full file name without extension must have at least eight characters. The order in which your photos appear in your slide show will be determined by the number (xxxx) in the file name. Some examples of acceptable file names are DSC00001.jpg and DSC00002.jpg

12 Click OK to save the file.

You can also add MPEG1 video files to your Slide Show by following the steps below. The order in which your video clips (MOV0xxxx files) appear in your Slide Show is determined by the number (xxxx) in the file name.

1 Insert the **Memory Stick** into the media slot.

2 Click the My Computer icon on the desktop.

3 Click the Removable Disk S: icon.

4 Create a new folder and name it “MSSONY.”

5 Open the MSSONY folder and create a new folder named “MOML0001.”

6 From the PictureGear File menu, point to File Process, and then select Still Format Conversion.

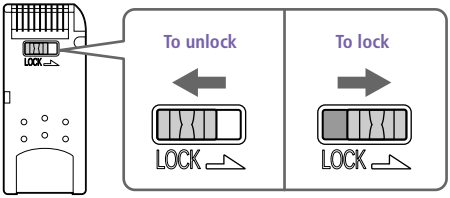
7 Copy the MPEG file into the MOML0001 folder.

8 Rename the MPEG file MOV0xxxx.mpg, where xxxx is any four-digit number.

9 To begin showing your slides, eject the **Memory Stick** and then reinsert it. The slide show will begin automatically.

*To protect data on **Memory Stick** media from accidental changes*

Memory Stick media contains a write-protect tab. The write-protect tab prevents accidental changes to information recorded on the **Memory Stick** media. When you slide the write-protect tab to the LOCK position, the **Memory Stick** is write-protected, which means you cannot delete, copy, or save information on the **Memory Stick**. When you slide the tab to the un-LOCK position, you can write to or modify the **Memory Stick** contents.



*To change the way the computer responds when a **Memory Stick** is inserted into the **Memory Stick** media slot*

Change the options on the **Memory Stick** tab in the PPK Setup software.

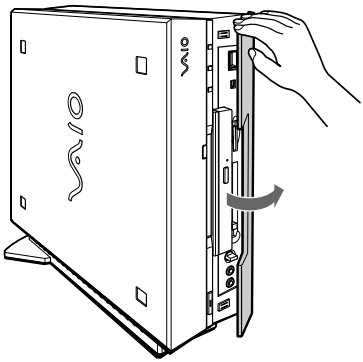
Using PC Cards

This computer has a card bus PC card slot that supports a Type I or II PC card.

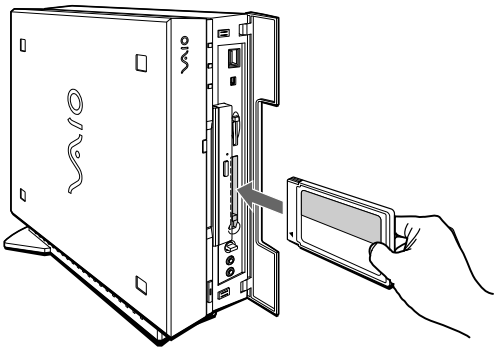
To insert a PC card

You do not need to shut down your computer when inserting a PC card.

1 Open the front panel.



2 Insert the PC card into the PC card slot until it clicks into position.



When the card is completely inserted, the eject button pops out. If you cannot insert the card, do not forcibly insert it. In this case, make sure the card is not inserted upside-down or backward, and then reinsert the card into the slot carefully.

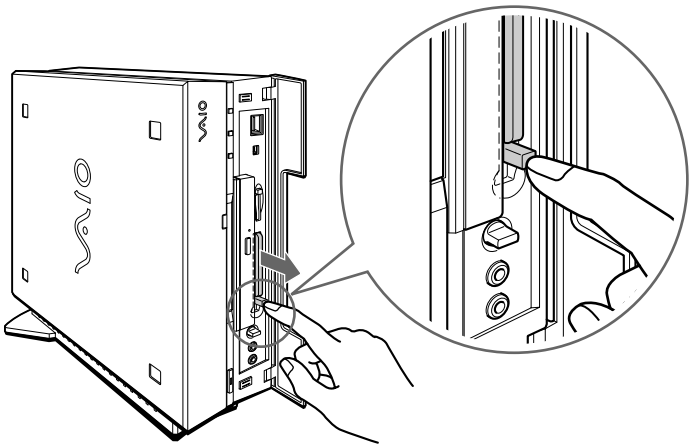
See the manual that came with the PC card for details on using it.

To close the front panel when the eject button is protruding, fold the button down onto the computer.

To eject a PC card

If you eject the PC card incorrectly, the system may not work correctly.

1. Click the Start button on the Windows® taskbar, click Settings, and then click Control Panel.
2. Click the PC Card icon.
3. Click the name of the card that you want to eject, and then click Stop.
4. When the message “You may safely remove this device” appears, click OK.
5. Push the PC card eject button on the front panel of the system unit. You may need to pull out the eject button before you can eject the card.



The card is ejected from the card connector. Remove the card by holding it by its edge and pulling it out carefully.

Using the Standby Function

When you are finished using your computer, you can put it in standby mode rather than turn it off completely. Putting the computer in standby mode allows you to return quickly to normal computer use.

To put the computer in standby mode manually

1. Save your work and close any applications that are running. (You can leave Windows running.)
2. Press the ☾ (Standby) button on the top of the keyboard.

   The computer goes into standby mode.

Alternatively, you can click the Start button on the Windows® taskbar, click Shut Down, select Standby, and then click OK.

To let the computer go into standby mode automatically

Click the My Computer icon on your desktop. Click Control Panel, and then click the Power Management icon. On the Power Schemes tab, select from the options in the Power schemes drop-down list. Then, choose settings for the power scheme you have selected. To save the settings under a name that is not offered in the Power schemes pulldown menu, choose your settings and then click Save As. Type in a name, and click OK. Click Apply to finalize your power settings.

To resume from standby mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

✍ If the display does not return from standby when you press the ☾ (Standby) button, your system may be in video standby mode. Press the space bar on the keyboard to return from video standby.

Standby Mode Indicators

You can tell which mode the computer is in by the color of the power indicator light.

Color	Mode
Amber	Computer is in standby mode.
Green	Computer is out of standby mode, ready to use.
No color	Computer is turned off.

In standby mode you may periodically hear the computer's fan turn on and off, depending on the room's temperature. This is normal functioning in standby mode.

Shutting Down Your Computer

When you are ready to turn off your computer for an extended period of time, use the following procedure to shut down the computer.

! **To avoid the potential loss of data, do not use the power switch to shut down the computer.**

To shut down your computer

If you plan to shut down your computer for a short period of time, you may want to use standby mode instead. See "Using the Standby Function" on page 23.

1. Click the Start button on the Windows® taskbar to open the Start menu.
2. Click Shut Down to display the Shut Down Windows dialog box.
3. Select the Shut Down option.
4. Click OK to complete the shutdown process.

   Respond to any prompts about saving documents.

5. Wait for your computer to turn off automatically — the power indicator light turns off.
6. Turn off any peripherals connected to your computer. The LCD display turns off automatically when the computer shuts down.

You can also shut down your computer using the (Power) button on the keyboard. Pressing this button causes the system to perform a shutdown but does not give you any of the other options available on the Windows® Shut Down menu.

About the Power Switch

If your system "locks up" or "crashes," press and hold the power switch for four seconds to force your system to power off. You may need to repeat this procedure. See "Locating Controls and Connectors" on page 5 for the power switch's location.

Using the System Recovery CD(s)

You can reinstall software titles that shipped with your computer if they are corrupted or accidentally erased. You may not need to recover the entire contents of your hard drive. If you experience a problem with your computer, reinstalling an individual device driver or software title may correct the problem.

Use the Application Recovery CD(s) to reinstall individual applications or device drivers. See "Using the Application Recovery CD(s)" on page 28.

The System Recovery CD(s) contain a backup copy of all the software originally installed on your hard disk drive. **They can be used only to recover the hard disk of the Sony computer you purchased.**

The System Recovery utility gives you three options:

- **Full Restore without Format** restores all the software titles that originally came with your computer without formatting the hard disk.
- **Full Restore with Format** formats the hard disk drive and then restores all the original software. If your hard drive is partitioned into C and D drives, the computer will offer you the option to reformat the drive into a single partition.
- **Operating System Only** (Windows 98® Restore with Format) formats the hard disk drive and restores the Windows® operating system and the device drivers that shipped with your computer. This option is recommended for advanced users only.

! **If you choose the Full Restore with Format or Operating System Only option, your hard disk will be formatted, which removes all the information on the hard disk drive. You will lose any software you have installed and any other files you have created since you started to use your computer. This means you will have to reinstall any applications that were not included with the computer when you purchased it. If you choose the Full Restore without Format option, you may need to reinstall applications that were not included with the computer when you purchased it. If you have any questions on using the System Recovery CD(s), contact Sony Customer Support.**

To use the System Recovery CD(s)

You need to complete the Windows registration process when you use the System Recovery CD(s).

1 Insert the Sony System Recovery CD in the DVD-ROM drive.

The System Recovery utility boots from the DVD-ROM drive. It must be in the drive when you turn on the computer.

2 Shut down your computer as described in "Shutting Down Your Computer" on page 24.

3 Wait 30 seconds and turn on your computer.

4 Click OK to signify you have read and accept the Microsoft End-User License Agreement.

5 When the System Recovery menu appears, follow the on-screen instructions to complete the recovery process.

Your system may include one or two System Recovery CDs. If you have two System Recovery CDs, insert the first CD to run the System Recovery program. You are prompted to insert the second CD once the information from the first CD has been installed.

The recovery process takes 30 to 60 minutes to complete.

Using the Application Recovery CD(s)

The Application Recovery CD(s) allow you to reinstall individual applications and device drivers if they are corrupted or accidentally erased. Reinstalling an individual device driver or software title may correct a problem you are experiencing with your computer, and you may not need to recover the entire contents of your hard drive. If you do need to reinstall all the software titles that shipped with your computer, use the System Recovery CD(s). See “Using the System Recovery CD(s)” on page 26.

You must be in Windows to run the Application Recovery CD(s). The application will not run from DOS. If you have any questions on using the Application Recovery CD(s), contact Sony Customer Support.

To use the Application Recovery CD(s)

1. Turn on your computer. If your computer is already on, close all applications.
2. When the Windows desktop appears, insert the Sony Application Recovery CD in the DVD-ROM drive. The Application Recovery utility loads automatically.
3. When the Application Recovery menu appears, follow the on-screen instructions to complete the recovery process.

Your system may include one or two Application Recovery CDs. If you have two Application Recovery CDs, insert the first CD to run the Application Recovery program. You may be prompted to insert the second CD, depending on the application you wish to restore.

About the Software on Your Computer

Your VAIO Slimtop computer is ready to help you work, play, learn, and communicate as soon as you turn it on. This section gives you an overview of the activities you can perform with your software titles. For support information, see “For Answers to Your Software Questions” on page 34.

Adobe Acrobat® Reader

Adobe Systems Incorporated

Acrobat Reader software allows you to view, navigate, and print electronic documents in Adobe’s Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe PhotoDeluxe® Home Edition

Adobe Systems Incorporated

Create amazing photo effects with PhotoDeluxe. Without learning complex software, you can enhance, restore, and be creative with your photos. Includes built-in guided activities, stock photos, clip art, and templates to assist you.

Adobe Premiere® LE

Adobe Systems Incorporated

Adobe Premiere LE offers an interface and editing tool for producing movies for video, multimedia, or the Web. View source clips and edited footage simultaneously in the monitor window. Create video clips up to three hours long with complete audio-video synchronization.

America Online®

America Online

America Online is the world's most popular Internet online service. Stay in touch with family and friends with Easy-to-Use E-mail, manage your personal finances, get the latest news and sports scores, and chat with thousands of others who share your interests.

AT&T WorldNet® Service

AT&T

Fast, reliable Internet access from AT&T WorldNet Service. AT&T WorldNet Service provides Web-based e-mail, a personalized start page from Excite, easy access to the Excite search engine, free Web pages, online and live agent technical support, instant messaging, and special shopping discounts at Market Square.

CompuServe® 2000

CompuServe Interactive Services

The all new CompuServe 2000 delivers a powerful tool for Internet users who want serious and timely information, in-depth research, and professional communities backed by state-of-the-art technologies, including high-speed access and powerful e-mail messaging.

Digital Media Bar™

Sony Electronics

Media Bar software is your all-in-one solution for audio / video playback. It handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio / video library cataloging and playlist management, in addition to digital video quality control and effects features.

DVgate™

Sony Electronics

Connect a digital video camera recorder to the i.LINK connector and capture your own video clips. You can edit the clips from your video, add others, and combine clips into new movie segments.

EarthLink TotalAccess™

EarthLink Network, Inc.

An Internet Service Provider that supplies access, information, and assistance to its customers, introducing them to the Internet. Member benefits include e-mail, newsgroups, a Personal Start Page, a free 6 MB web site, a member magazine, and 24-hour technical support.

McAfee's VirusScan®

Network Associates, Inc.

Protect your computer from viruses. VirusScan can detect viruses from floppy disks, Internet downloads, e-mail attachments, intranets, shared files, CD-ROMs, and online services.

Microsoft® Internet Explorer for Windows® 98

Microsoft Corporation

Internet Explorer delivers the Web the way you want it. It's safe, easy to use, and you can personalize how you access the Web. Outlook Express and other tools in Internet Explorer also help you have a great experience when you are on the Web!

Microsoft® Outlook® Express

Microsoft Corporation

Outlook Express, the messaging tool that takes your e-mail and newsgroup communications to new heights! Outlook Express is easy to set up and use, and provides you with secure, personalized, and complete features that make creating, sending, and reading your e-mail a more rich and dynamic experience.

Microsoft® Word 2000

Microsoft Corporation

Microsoft Word 2000 makes it easy to create common Web, e-mail, and print documents for use around the world. It embraces HTML as a first-class file format and extends Word's ease-of-use to the Web and e-mail. Word 2000 also extends that ease of use to international users, making it easy to create multilingual documents.

Netscape Communicator®

Netscape Communications

Netscape Communicator is the all-in-one Internet tool that makes it easy to browse the Web, send Internet e-mail, chat, read newsgroups, and compose great Web documents.

PictureGear™

Sony Electronics

This image management software displays images from your hard drive, a Sony digital still camera, or a Sony Mavica® camera. The images appear in a convenient light-table format, so that you can easily view the contents of an entire folder.

Prodigy Internet™

Prodigy Communications Corporation

An Internet service that helps you find what you need online faster and smarter. Prodigy delivers powerful online content, such as sports scores, stock quotes, news, and easy access to Excite™, plus a personal e-mail account and quality customer service, all at a competitive price.

Quicken® Basic

Intuit, Inc.

Quicken is the fastest, easiest way to organize your finances. Quicken works just like your checkbook, so it's easy to learn and use. Quicken manages all of your finances, bank accounts, credit cards, investments, and loans. You can even pay your bills online.

Smart Capture

Sony Electronics

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam® Camcorder or other cameras that support the i.LINK interface. It allows you to capture and compress video or still images that you can save or share via e-mail. A smart solution to computer, digital audio/video, and network convergence.

Smart Connect

Sony Electronics

Smart Connect allows you to use an i.LINK cable to connect your VAIO computer to another VAIO computer that supports Smart Connect. You can then use one computer to copy, delete, and edit files on the other computer. You can also print from a printer attached to either computer.

Sound Forge®

Sonic Foundry

Sound Forge allows you to put powerful audio processing tools and effects to work on your desktop. Simply cut, copy, and paste your way to striking multimedia files for use in everything from Web pages to desktop presentations.

VAIO Action Setup

Sony Electronics

VAIO Action Setup manages the settings for your computer's Programmable Power Keys (PPK), **Memory Stick** media, i.LINK interface, and internal timer. For more information, see "VAIO Action Setup" on page 14.

WinFax® Basic Edition

Symantec Corporation

WinFax Basic Edition incorporates an easy-to-use interface that allows you to send and receive faxes easily. Upgrade to WinFax Pro to receive additional features.

About Your Recovery CDs

Application Recovery CD(s)

Sony Electronics

The Application Recovery CD program allows you to reinstall individual applications and device drivers. Use it to restore corrupted or accidentally erased files.

System Recovery CD(s)

Sony Electronics

The System Recovery CD program allows you to restore the software titles that shipped with your computer if they become corrupted or are erased accidentally. It can be used only to restore the hard disk of the Sony computer you purchased.

For Answers to Your Software Questions

Acrobat® Reader, Adobe PhotoDeluxe® Home Edition (Adobe Systems Incorporated)

Web site	http://www.adobe.com/
phone	206-628-2746 (fee-based support)
fax	206-628-5737
e-mail	techdocs@adobe.com
hours	M-F, 6 AM-5 PM PT

America Online® (America Online)

Web site	http://www.aol.com/
phone	800-827-3338
hours	7 days a week, 6 AM - 2 PM ET

AT&T WorldNet® Service (AT&T)

Web site	http://www.att.net
phone	800-400-1447
e-mail	worldnet@attmail.com
hours	7 days a week, 24 hours a day

CompuServe® 2000 (CompuServe Interactive Services)

Web site	http://www.compuserve.com/
phone	800-848-8990
hours	M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET

EarthLink TotalAccess™ (EarthLink Network, Inc.)

Web site	http://help.earthlink.net/techsupport/
phone	800-395-8410
e-mail	support@earthlink.net
hours	7 days a week, 24 hours a day

GTE Easy Sign-up (GTE Internet)

phone	800-927-3000
hours	7 days a week, 24 hours a day

McAfee's VirusScan (Network Associates, Inc.)

Web site	http://support.mcafee.com
phone	408-988-3832
e-mail	cybr@nai.com
hours	M - F 9 AM - 5 PM Central Time

MindSpring Internet Desktop (MindSpring Enterprises, Inc.)

Web site	http://help.mindspring.com/support
phone	800-719-4660

Quicken® Basic (Intuit Inc.)

Web site	http://www.intuit.com/support
phone	900-555-4688
hours	7 days a week, 24 hours a day

Sound Forge® (Sonic Foundry)

Web site	http://www.sonicfoundry.com/support/
phone	608-256-5555
fax	608-256-7300
e-mail	support@sonicfoundry.com
hours	M - F, 8 AM - 7 PM CT

Windows® 98 Second Edition Operating System, Word® 2000, Internet Explorer 5, Outlook® Express (Microsoft Corporation)

Web site	http://www. sony.com/pcsupport
phone	888-4SONYPC (888-476-6972)*
hours	7 days a week, 24 hours a day

* Support from 1-888-4SONYPC is free of charge for 90 days after the original date of purchase.

WinFax® Basic Edition (Symantec Corporation)

Web site	http://www.symantec.com/techsupp/
phone	800-798-0850
fax	800-554-4403 in North America 541-984-2490 outside North America

Troubleshooting

This section describes how to solve common problems you may encounter when using your computer. Many problems have simple solutions, so try these suggestions before you call Sony Customer Support.

My computer does not start

- Check that the computer is plugged into a power source and that it is turned on. Check that the power light is lit on the front panel of the computer.
- Confirm that a diskette is not in the diskette drive (unless you are using a bootable diskette).
- Confirm that the power cord and all cables are connected firmly, as described on the color poster.
- If you plugged the computer into a power strip or UPS, make sure the power strip or UPS is turned on and working.

My computer or software program "locks up"

- Close the application that is currently "locked up" by pressing Ctrl+Alt+Delete. In the Close Program dialog box, scroll down until you locate "(Not responding)" next to an application. Select this application and click End Task. Windows attempts to close the application. If the attempt is unsuccessful, a second dialog box appears. Select End Task again.
- If you are unable to "unlock" the application, repeat the above steps but select Shut Down when the Close Program dialog box appears.
- If the above steps fail to "unlock" your computer, save any unsaved work, if possible. Press Alt+F4. Select Restart and click OK.
- If you cannot restart as described in the preceding steps, you can restart the computer by pressing Ctrl+Alt+Delete or by pressing the power switch for more than six seconds.

> Pressing Ctrl+Alt+Delete may result in the loss of changes made to files that are currently open.

- Contact the software publisher or designated provider for technical support. See "For Answers to Your Software Questions" on page 34 for a list of phone numbers and Web addresses or see *Read Me First*.

My DVD-ROM/CD-ROM drive tray does not open

- Make sure the computer is turned on.
- If the Eject button does not work, you can open the tray by inserting a straightened heavyweight paper clip into the emergency eject hole.

When I click an application icon, a message such as "You must insert the application CD into your CD-ROM (DVD-ROM) drive" appears and the software does not start

- Some titles require specific files that are located on the application's DVD-ROM / CD-ROM. Insert the disc and try starting the program again.
- Check to make sure you inserted the DVD-ROM / CD-ROM with the label side facing up.

My modem connection is slow

The computer's modem uses K56flex™ technology / V.90. Many factors influence modem connection speed, including telephone line noise or compatibility with telephone equipment (such as fax machines or other modems). If you think your modem is not connecting properly to other computer-based modems, fax machines, or your Internet Service Provider, check the following:

- Have your phone company check that your phone line is free from any line noise.
- If your problem is fax-related, check that there are no problems with the fax machine you are calling. The modem that receives your call may be slower or may use a different communications protocol than your modem. If this is the case, the connection speed may be slower than expected.
- For optimum performance, ensure you are calling an Internet Service Provider number that is V.90-compliant.
- If you are having a problem connecting with your Internet Service Provider, check that the ISP is not experiencing technical problems.
- If you have a second phone line available, try connecting the modem to this line.

My modem does not work

- Check that the phone line is plugged into the line jack.
- Check that the phone line is working. You can check the line by plugging in an ordinary phone and listening for a dial tone.
- Check that the phone number the program is dialing is correct.
- Verify that the software you are using is appropriately configured to recognize and interact with the Sony computer modem. Call the software publisher if you do not know how to configure the software to recognize the modem. All programs preinstalled by Sony are compatible.
- If you suspect your modem is not functioning, you can perform a simple test to find out. Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click the Diagnostics tab and select COM2. Click More Info. If your modem is functioning, a More Info dialog box will display. If your modem is not functioning, an error message will appear.

My microphone is too sensitive to background noise

If you find there is too much background noise when you record sound, you should adjust the microphone gain by following these steps:

1. Right-click the speaker icon (Volume) in the lower-right Windows® task tray.
2. Click Open Volume Controls. The Volume Control screen appears.
3. In the Options menu, select Properties. The Properties screen appears.
4. Change the setting for "Adjust volume for" from Playback to Recording, and then click OK.
5. Click the Advanced button under Microphone Balance. The Advanced Controls for Microphone screen appears.
6. Deselect the check box for 1 Mic Gain (+20dB), then click the Close button.
7. Close the Recording Control window.

My mouse does not work

- Check that the mouse is plugged into one of the PS/2® connectors on the keyboard. The other connector connects the keyboard to the computer.
- There may be dust or dirt inside the mouse mechanism. To clean the mouse, follow these steps:
  - Turn off your computer. See "Shutting Down Your Computer" on page 24 for details.
  - Remove the mouse ball cover on the back of the mouse by turning the ring that covers the mouse ball counter-clockwise.
  - Turn the mouse upright, and drop the mouse ball into your hand.
  - Using a piece of tape, remove any dust or dirt on the mouse ball and inside the mouse ball socket.
  - Return the mouse ball to the socket, and replace the mouse ball cover. Secure the cover by turning the ring clockwise.

I cannot find the Windows® taskbar

- Check that the taskbar is not hidden or shrunken.
- Use the mouse to point to the left, right, top, and bottom edges of the screen.

See *Read Me First* for additional information on using your Sony computer.

To Reach Sony

For further assistance, call 1-888-4SONYPC (1-888-476-6972).

Specifications

Model	PCV-L630
Processor	600E MHz* Pentium® III
Hard Disk Drive	17 GB† Ultra DMA
Standard SDRAM	128 MB PC-100 SDRAM, expandable to 256 MB
Video RAM	8 MB SDRAM
Graphics	2X AGP 3D graphics hardware acceleration (ATi Rage™ 128 Pro 4XL)
Sound Capabilities	High fidelity 3D PCI audio Aureal AU8810
Diskette Drive	3.5” 1.44 MB FDD
DVD-ROM/CD-ROM Drive	4.8X (max.) DVD-ROM reading 24X (max.) CD-ROM reading**
Modem	K56flex technology / V.90 compatible data / fax modem††
Expansion Capabilities	Two PCI slots
Connection Capabilities (Front)	PC card (Card bus support) USB port Microphone Headphone **Memory Stick** media slot i.LINK (4-pin)
Connection Capabilities (Rear)	USB port Modem line (RJ-11) Phone line (RJ-11) Parallel (printer) Serial port VGA monitor LCD display Line In Line Out Keyboard i.LINK (6-pin)
Connection Capabilities (Keyboard)	Mouse (PS / 2-style) left and right connectors
Supplied Accessories	Stand (for vertical installation) Power cable Phone cable Keyboard cable PS / 2 Wheel Mouse VAIO Smart™ Convertible Keyboard Spacers (for bottom of the system) Ferrite core

Model	PCV-L630
Service	90-day limited express service*** Extendible to one year from original date of purchase upon registration
Limited Warranty	90-day parts/labor standard†† Extendible to one year from original date of purchase upon registration
Power Requirements	130 watts maximum
Dimensions	CPU: 11.2”(w) x 3.6” (h) x 13.4” (d) (280 mm x 90 mm x 335 mm) Keyboard: 15.9” (w) x 1.8” (h) x 7.1” (d) (398 mm x 45 mm x 178 mm) Display: 16.1” (w) x 13.1” (h) x 6.9” (d) (403 mm x 327 mm x 172 mm)
Weight	CPU: 11.9 lbs. (5.4kg) Display: 7.05 lbs (3.2 kg) Keyboard: 2.9 lbs. (1.3kg)
Operating Temperature	50º F to 95º F (+10º C to 35º C)

* MHz denotes microprocessor internal clock speed; other factors may affect application performance.

† GB means one billion bytes when referring to hard drive capacity. Accessible capacity may vary.

** Data on a DVD-ROM is read at a variable transfer rate, ranging from 2X at the innermost track to 4.8X at the outermost track(the data transfer standard 1X rate is 1385 kbytes/s). The average data transfer rate is 3.6X(4986 kbytes/s). Data on a CD-ROM is read at a variable transfer rate, ranging from 10.5X at the innermost track to 24X at the outermost track(the data transfer standard 1X rate is 150 kbytes/s). The average data transfer is 18X(2700 kbytes/s).

†† Maximum speed for faxing is 14.4 kbytes/s. Your modem is capable of downloading at 56 kbytes/s using K56flex technology or V.90. Your phone service, online service, or Internet Service Provider, however, may not support this technology or operate at this speed.

***Certain restrictions apply.

Specifications are subject to change without notice.

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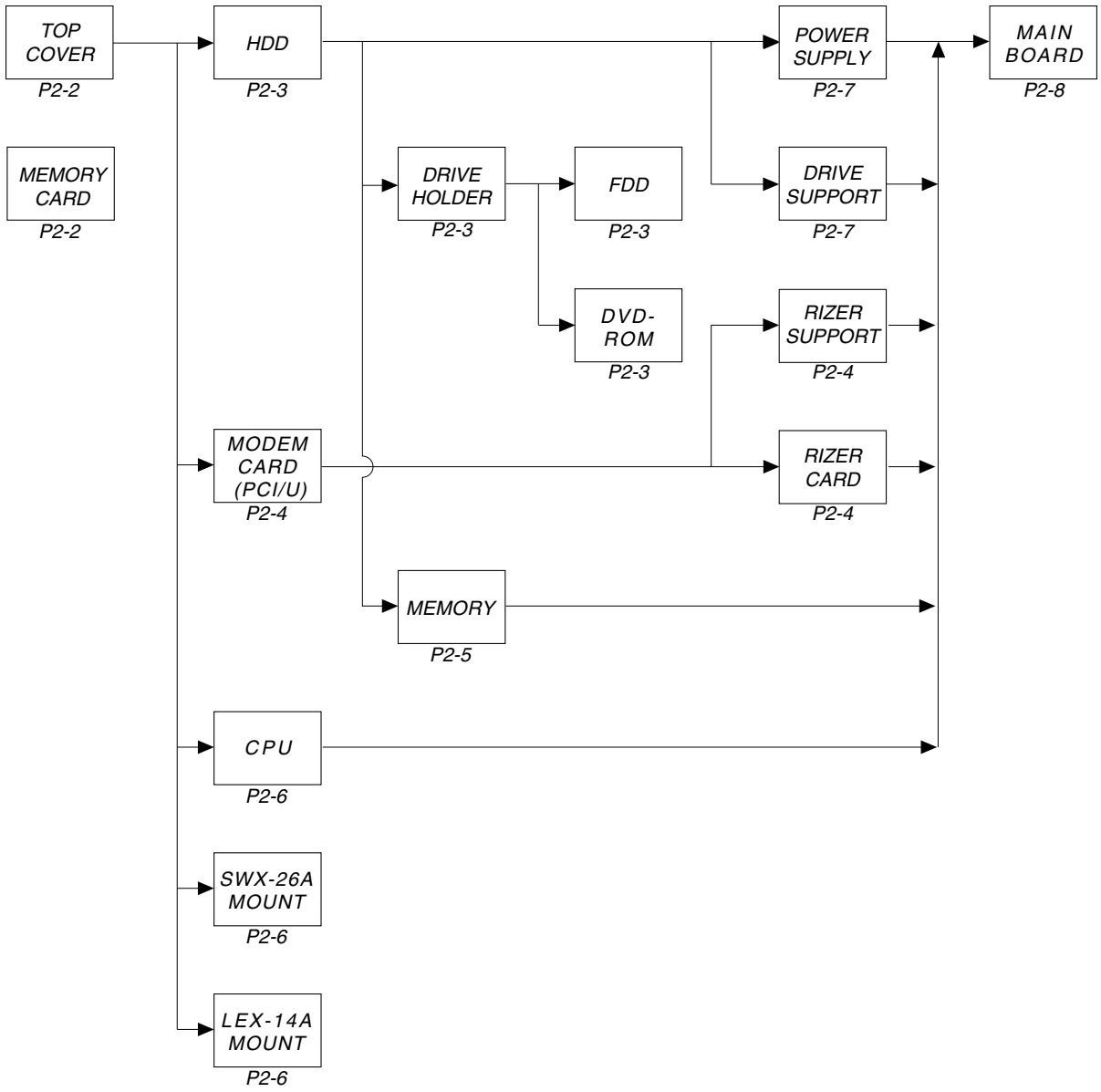
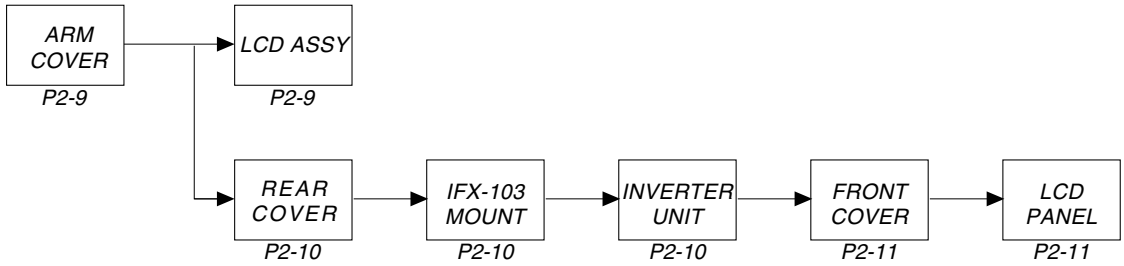
SECTION 2
DISASSEMBLY

2-1. FLOW CHART

• MAIN SECTION

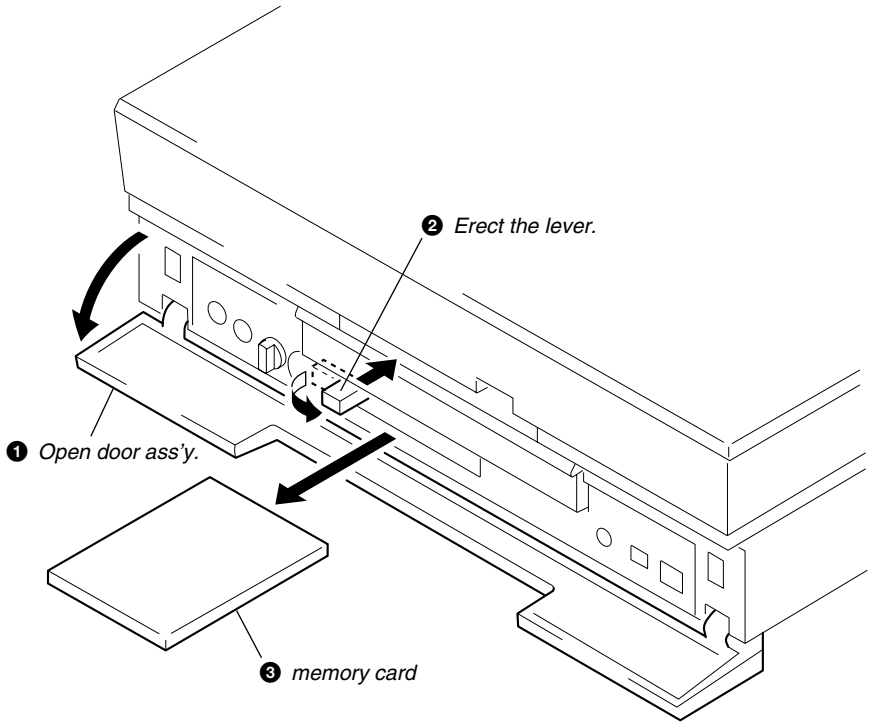


• DISPLAY SECTION

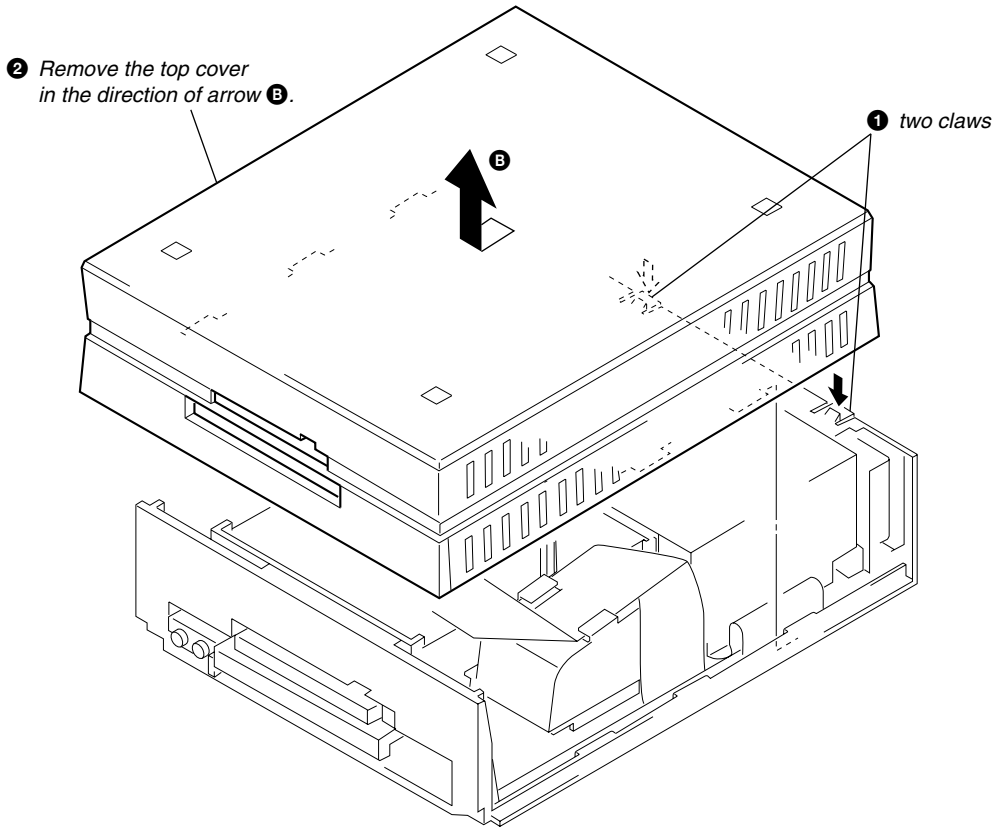


- P☐-☐ denotes the page concerned.
- HDD has a low resistance to vibration, requiring careful handling.

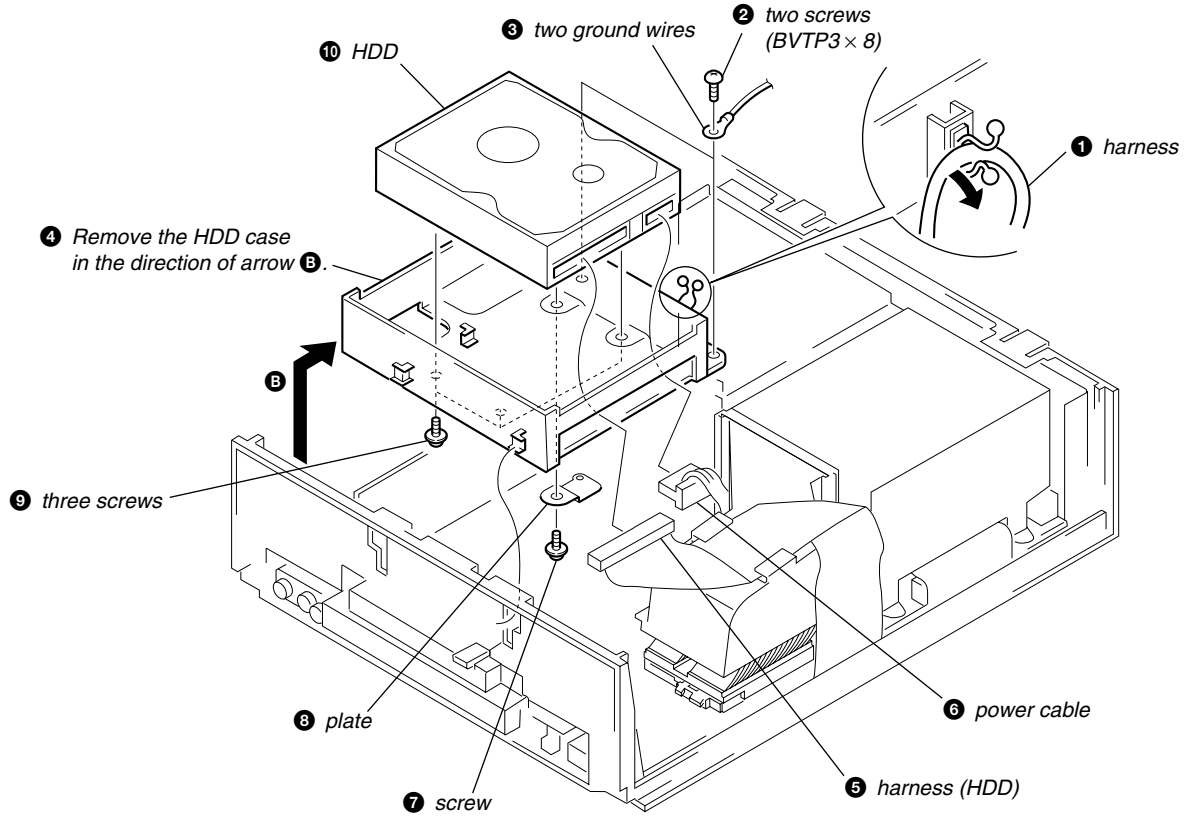
2-2. MEMORY CARD



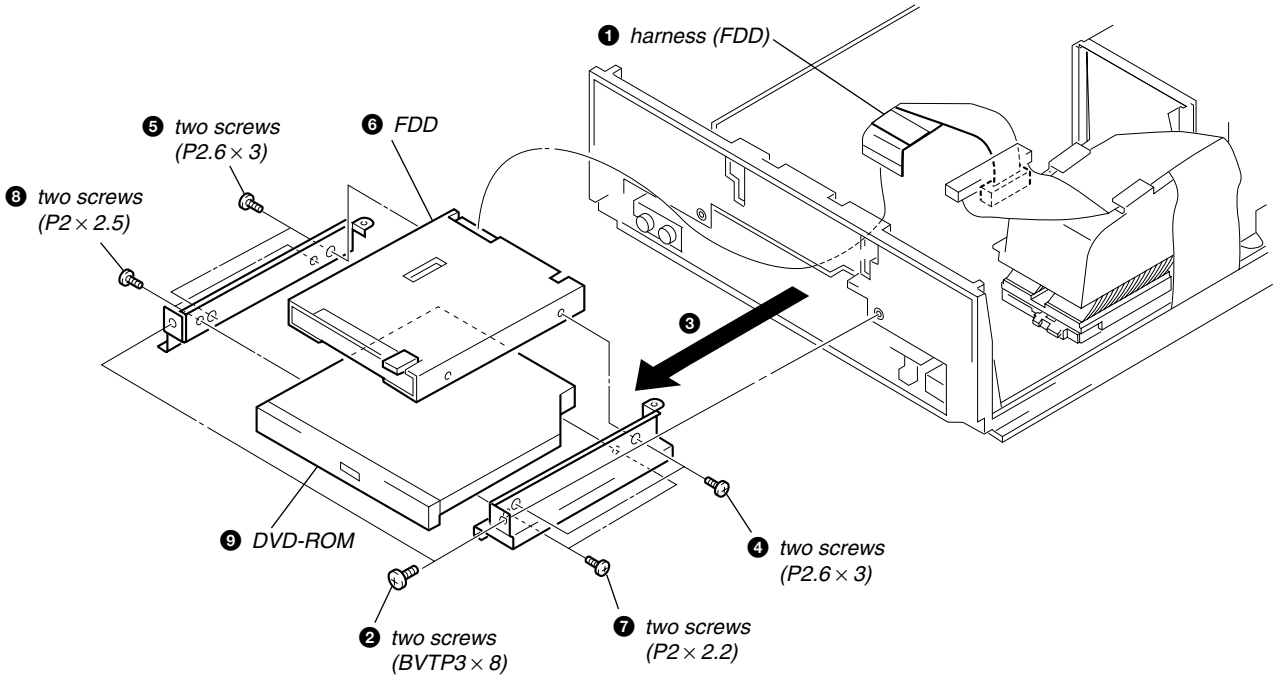
2-3. TOP COVER



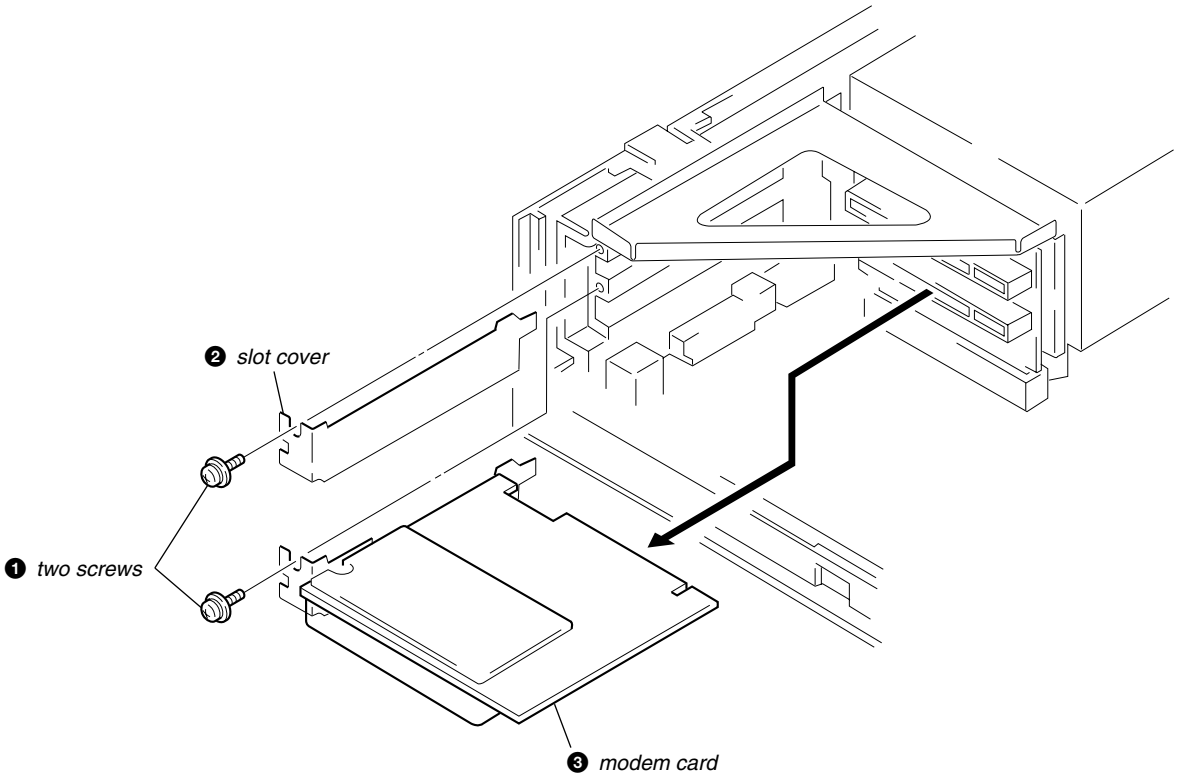
2-4. HDD



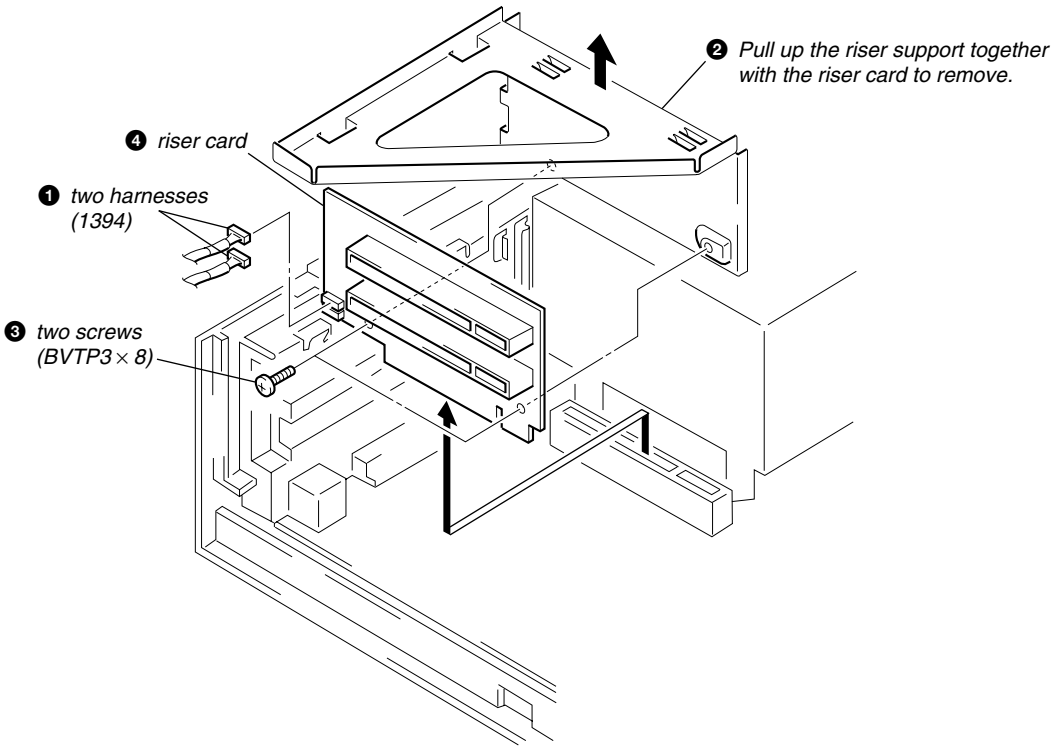
2-5. DRIVE HOLDER, FDD, DVD-ROM



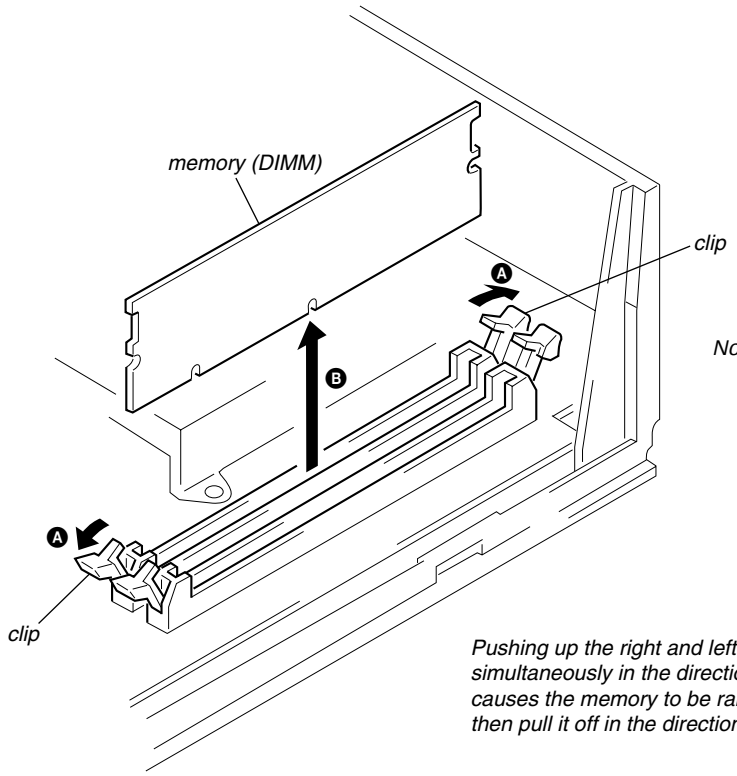
2-6. MODEM CARD



2-7. RISER SUPPORT, RISER CARD



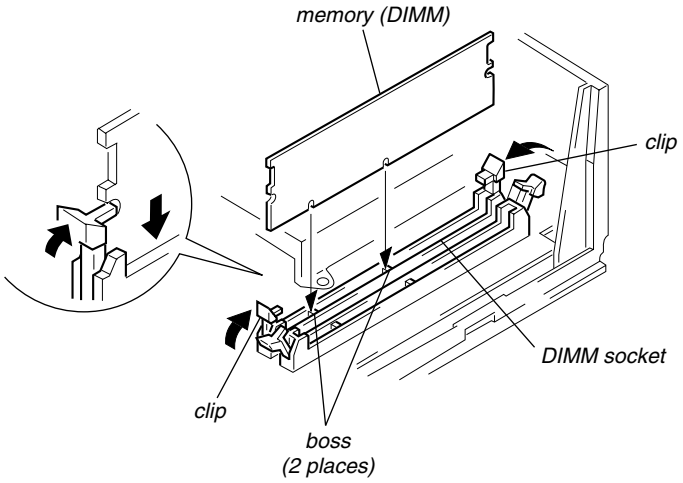
2-8. MEMORY (DIMM)



Note 1: HDD case has to be removed before removing the inside memory. Please refer to 2-4 to remove HDD case.

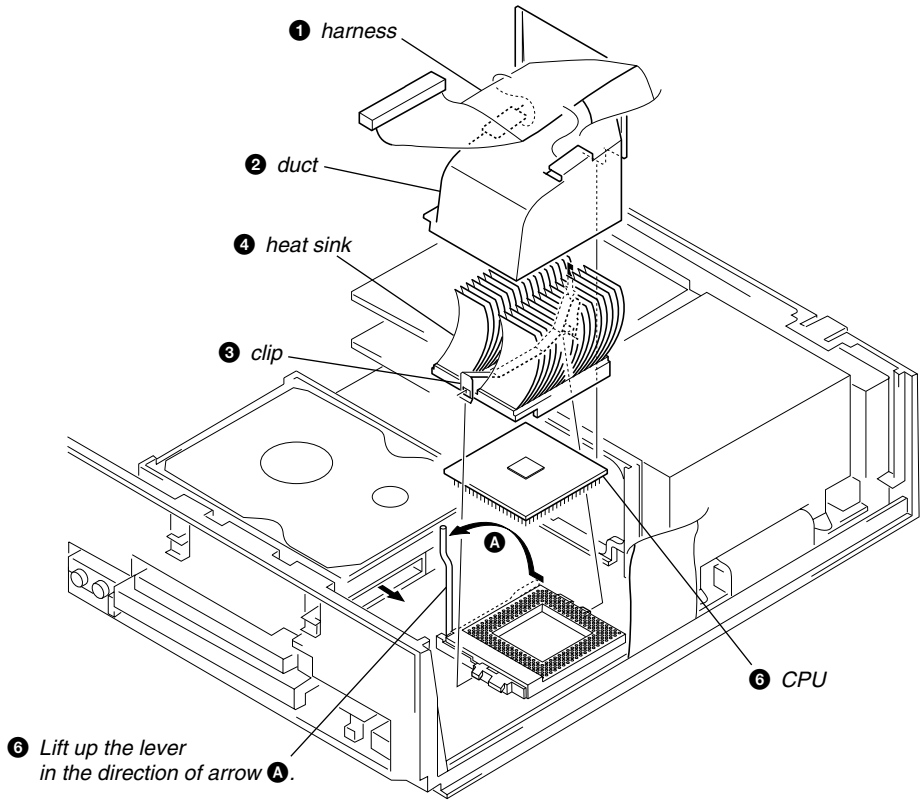
Pushing up the right and left clips simultaneously in the direction ❶ causes the memory to be raised, then pull it off in the direction ❷.

• **MEMORY (DIMM) INSTALLATION**

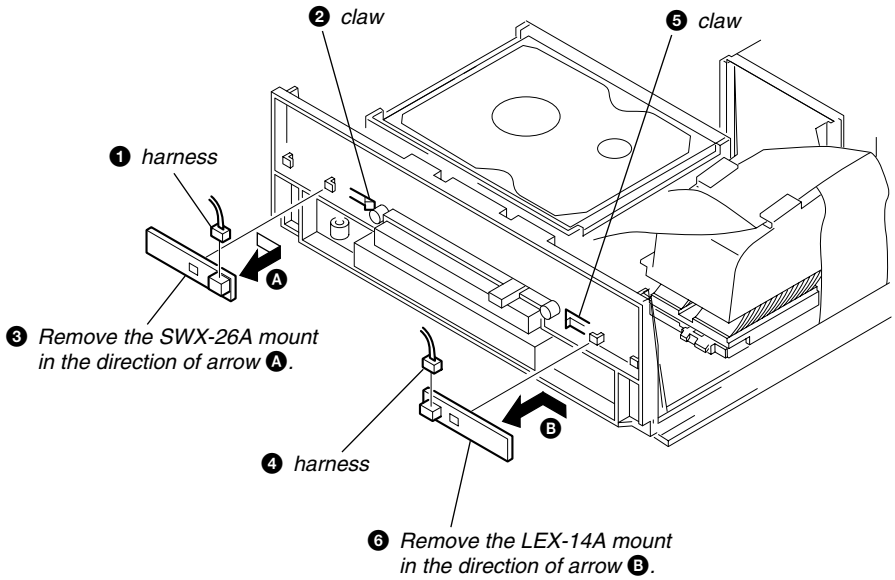


Note 1: With the clips left open, insert the memories so that bosses (2 places) of DIMM socket engage with slots (2 places) of memories.
Note 2: Make sure that the clips are closed when the memories were inserted completely.
Note 3: Insert the memories, starting from the one having smallest bank number.

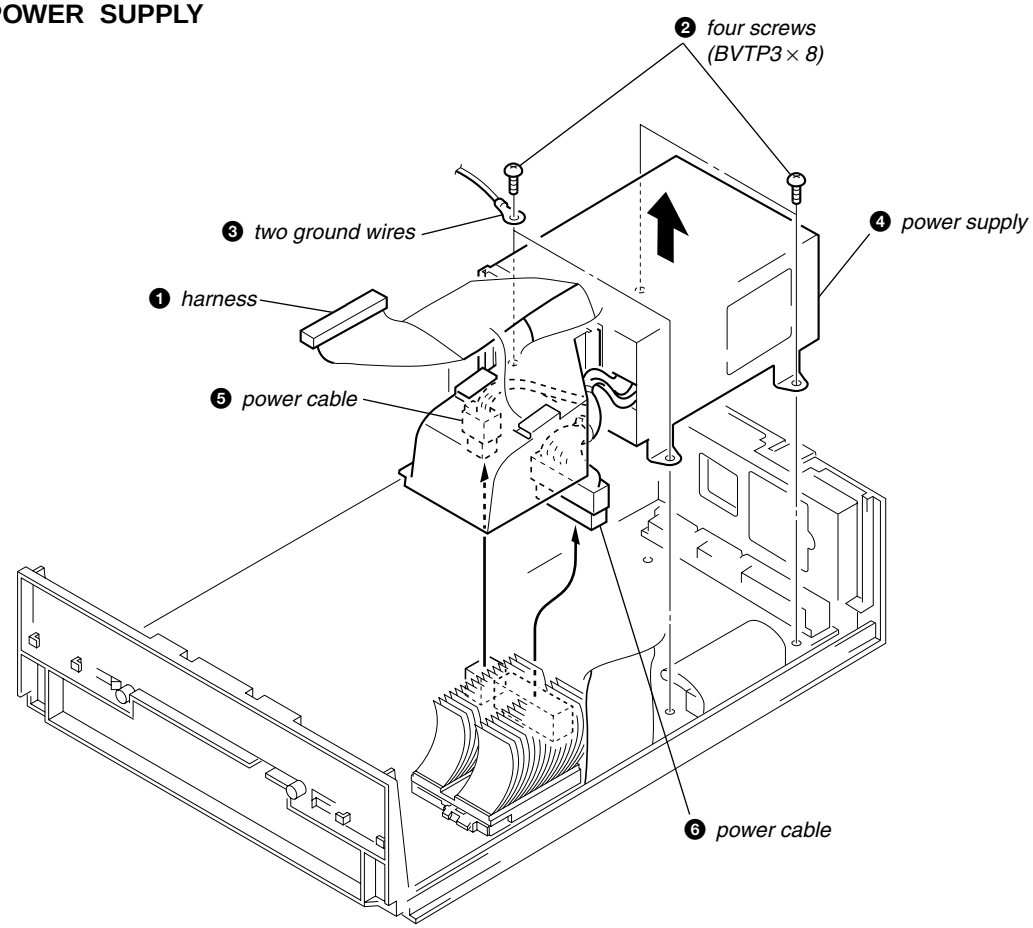
2-9. CPU



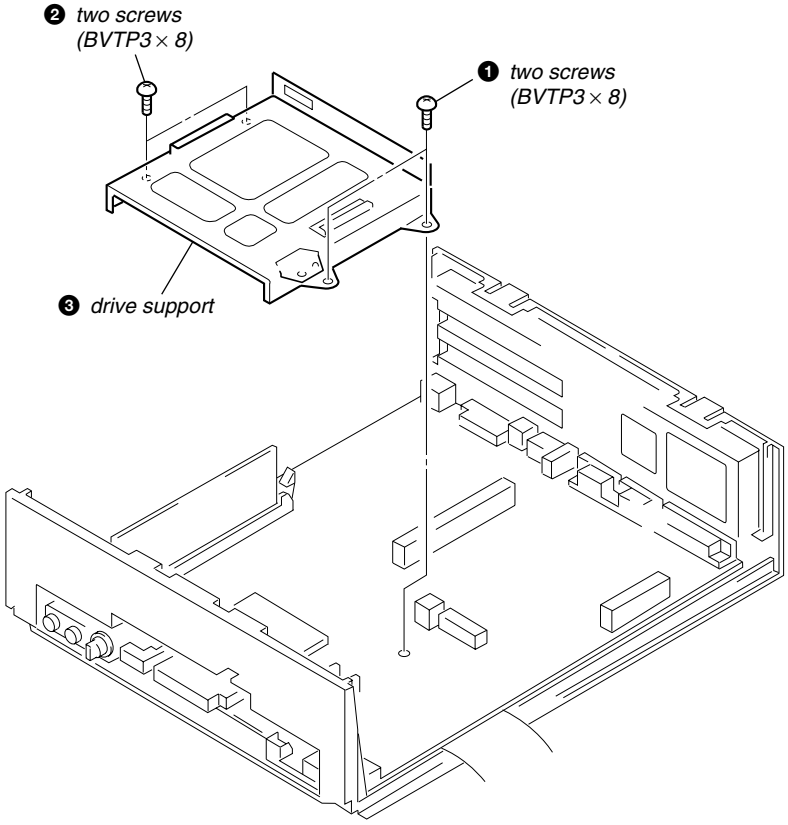
2-10. SWX-26A, LEX-14A MOUNT



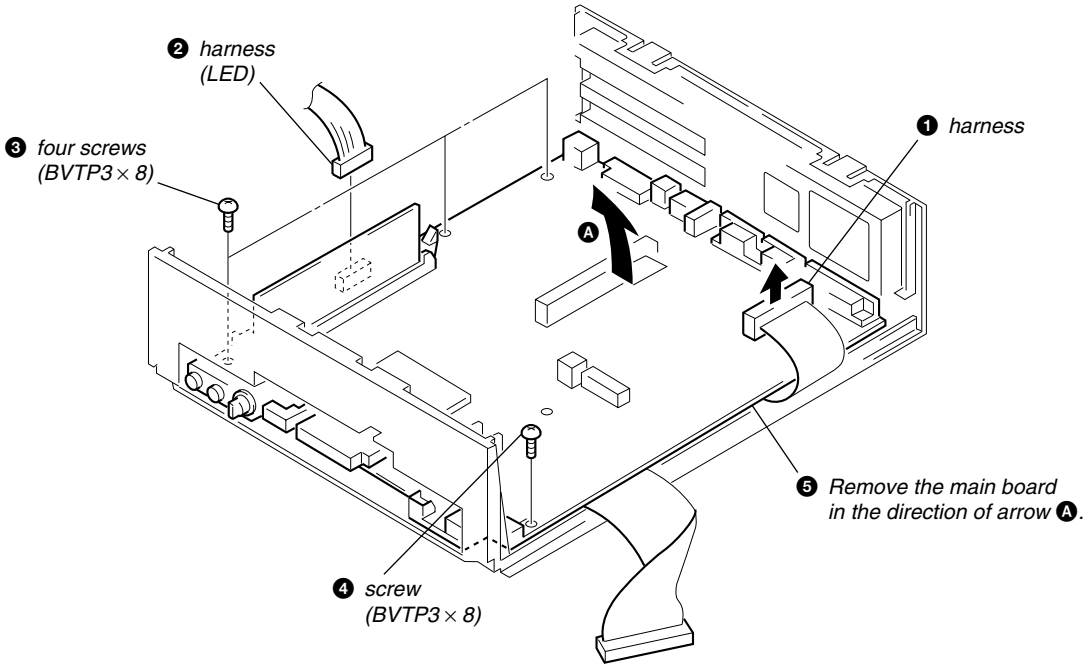
2-11. POWER SUPPLY



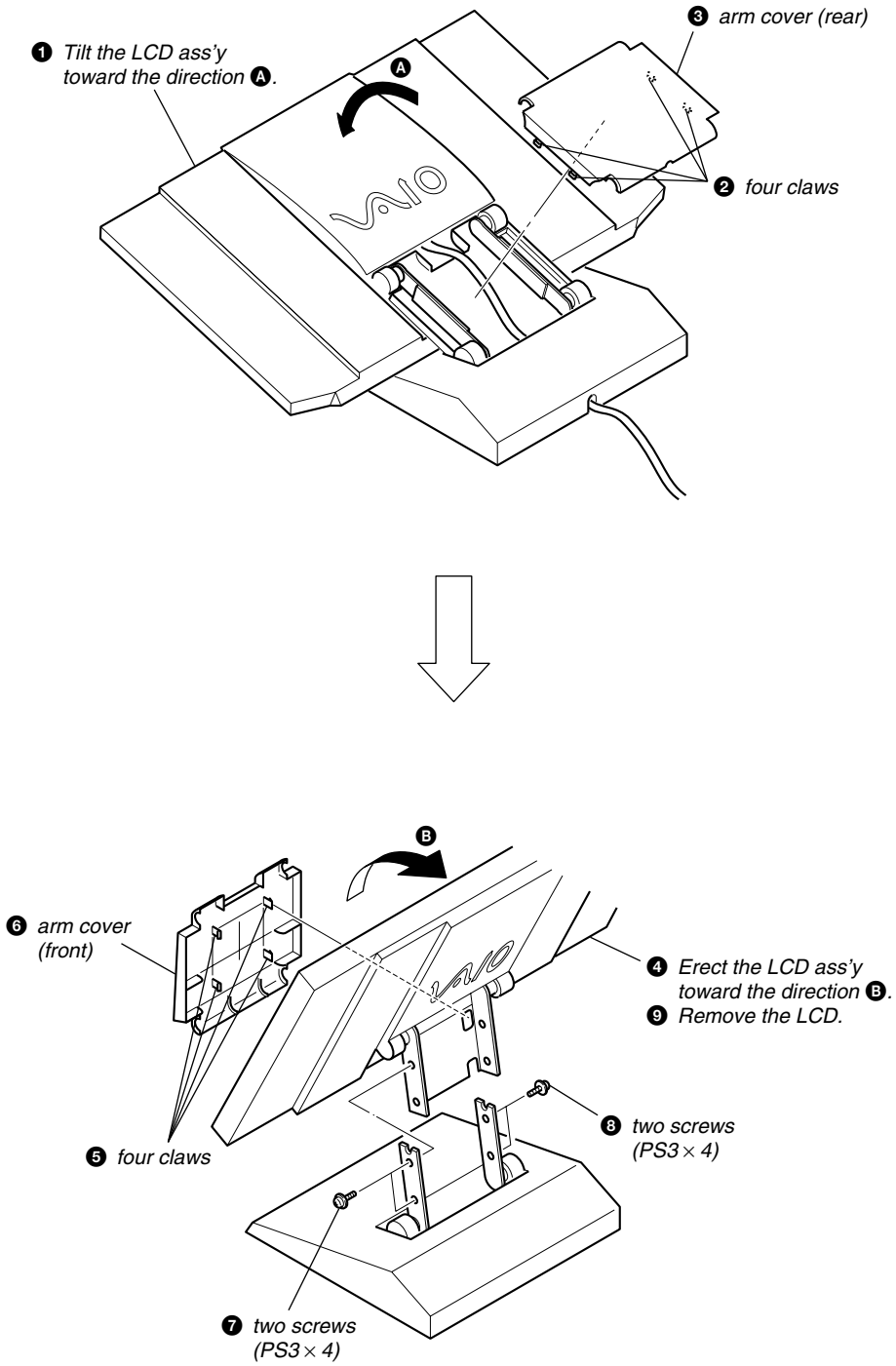
2-12. DRIVE SUPPORT



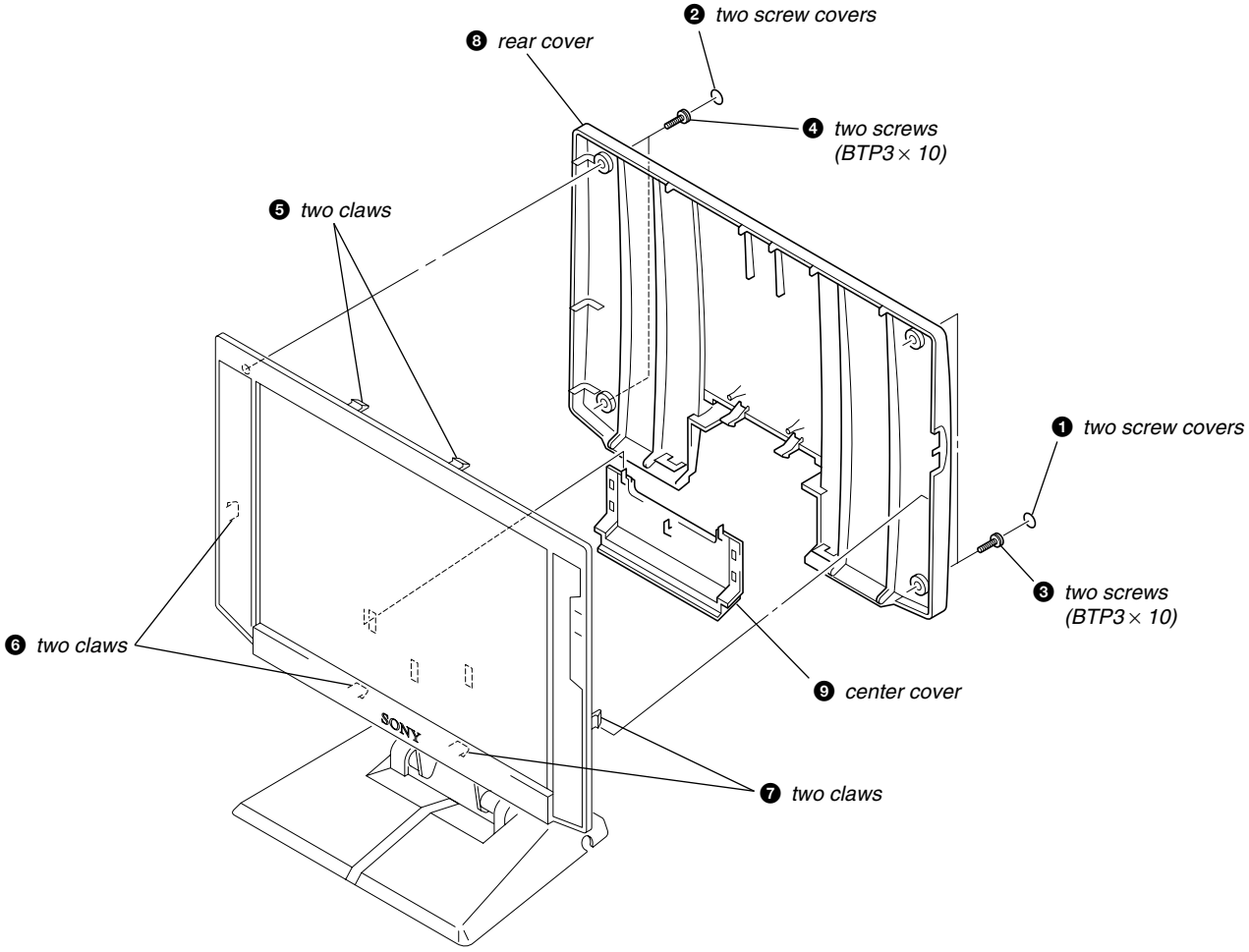
2-13. MAIN BOARD



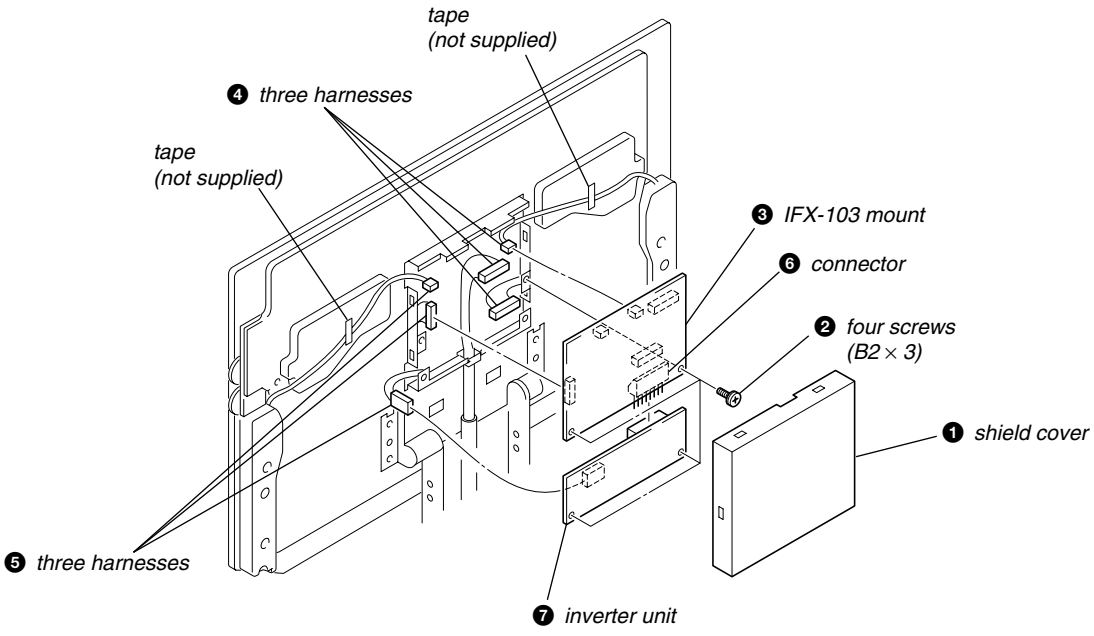
2-14. LCD ASS'Y


❶ Tilt the LCD ass'y toward the direction Ⓐ.
Ⓐ
❸ arm cover (rear)
❷ four claws
Ⓑ
❻ arm cover (front)
❹ Erect the LCD ass'y toward the direction Ⓑ.
❾ Remove the LCD.
❽ two screws (PS3 × 4)
❺ four claws
❼ two screws (PS3 × 4)

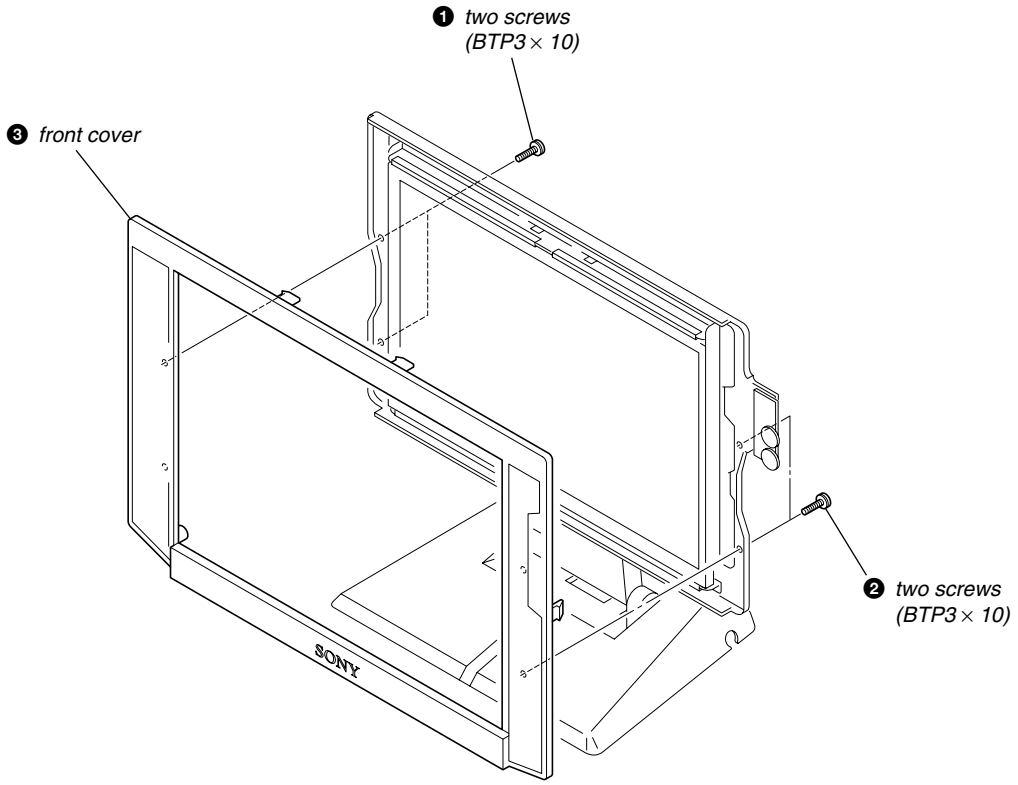
2-15. REAR COVER



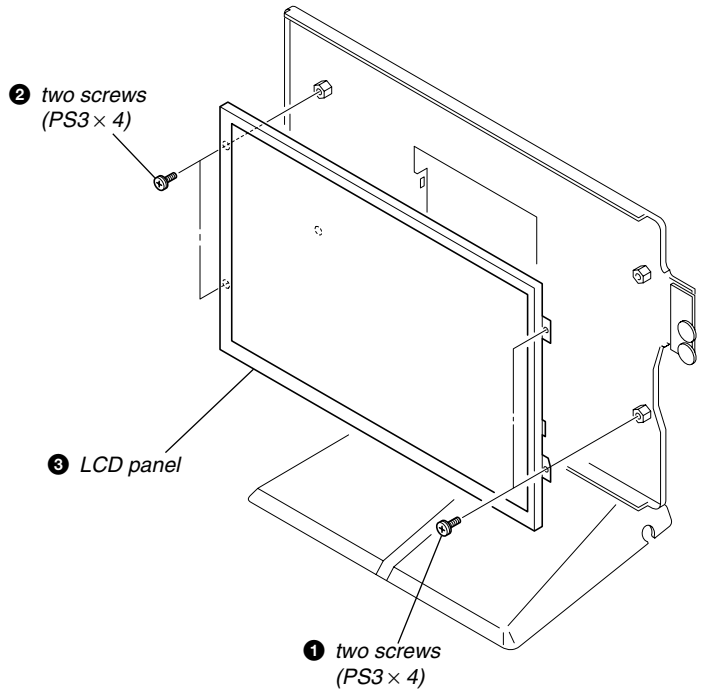
2-16. IFX-103 MOUNT, INVERTER UNIT



2-17. FRONT COVER

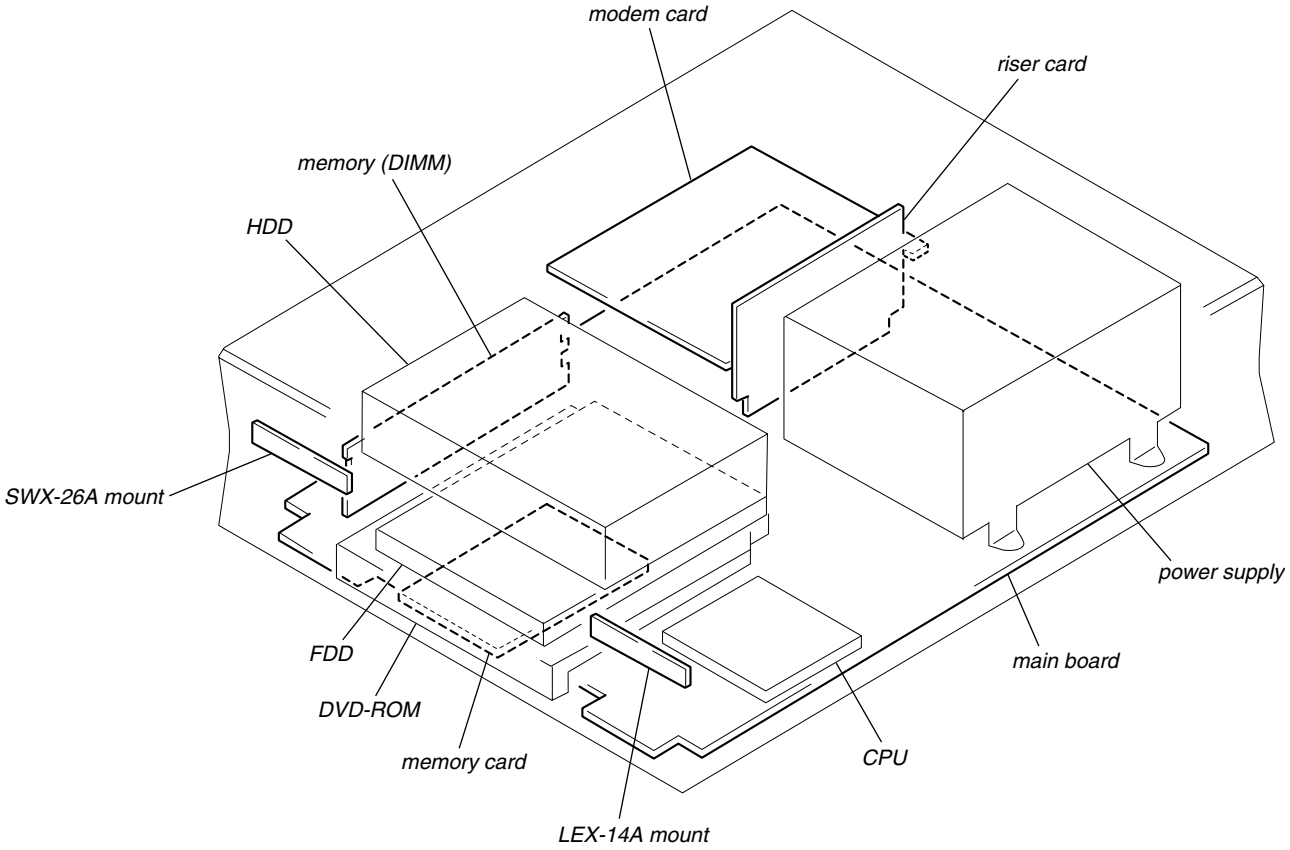


2-18. LCD PANEL

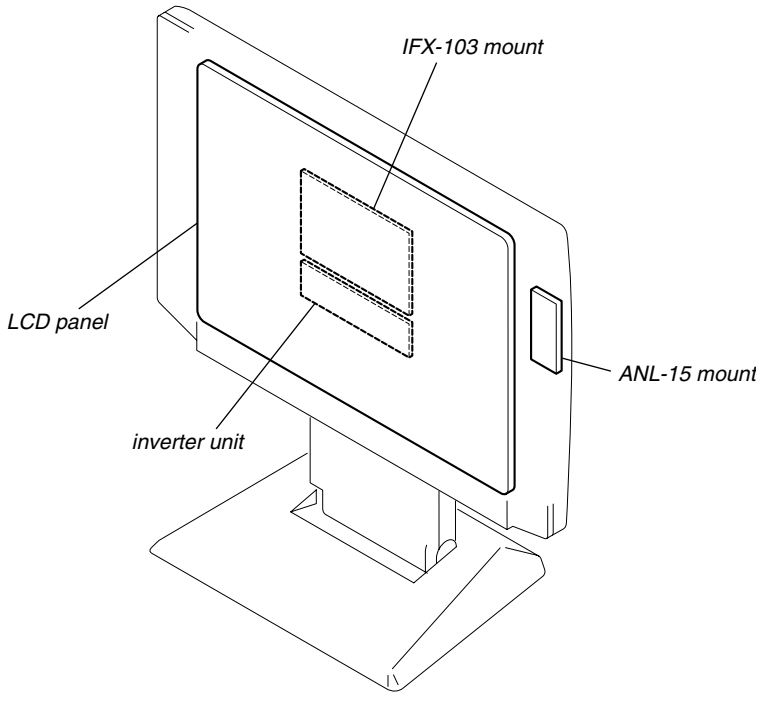


2-19. MAIN ELECTRIC PARTS ARRANGEMENT

• **MAIN SECTION**



• **DISPLAY SECTION**



SECTION 3
MOTHERBOARD DESCRIPTION

1.1 Overview

The PCV-L630 motherboard supports the following features:

Form factor

See the mechanical drawing

Processor

Single Socket-370 Pentium III/Coppermine processor

66/100 MHz front side bus speed (other settings are also available, for Sony internal test use)

Onboard Socket 370

VRM 8.4 compatible

Main memory

Two 168-pin DIMM sockets

Supports up to 256MB of synchronous DRAM (PC-100 SDRAM) memory

Non-ECC memory only.

Intel 440BX/PIIX4E chipset and PCI/IDE Interface

Intel 440BX north bridge

Integrated PCI bus mastering controller

Integrated Accelerated Graphics Port (A.G.P.) controller

Intel PIIX4E south bridge

Supports up to four IDE drives or devices

Multifunction PCI-to-ISA bridge

USB and DMA controllers

Two fast IDE interfaces (standard type HDD and note book style CD-ROM)

Ultra ATA33 support

Power management logic

Real-time clock

I/O features

Winbond W83977EF-AW Super I/O controller

Integrates standard I/O functions: floppy-drive interface, one multimode parallel port, two FIFO serial ports, keyboard and mouse controller.

Supports Japanese standard "Floppy 3mode"

Expansion slots:

Two PCI slots on riser card

Onboard TITSB12LV22(lnk), TSB41LV03(phy) IEEE-1394 OHCI interface (up to 400Mbps, 2 ports)

Video subsystem

ATI RAGE 128 PRO 4XL video chip (215R4U)

AGP 2X bus connection

8MB SDRAM video memory (1M x 16 SDRAM 4pcs.)

TMDS I/F for external LCD panel

Audio subsystem

Aureal AU8810 A2 PCI sound controller

AC97 conpatible audio codec WM9701A

Audio connectors: Link In, Link Out, Mic In, Headphone Out

Card-bus/PCMCIA slot

One Card Bus slots (type I,II)

Ricoh RL5C475I I PCI-Card Bus bridge

Sony Memory Stick slot

Sony Gate Array with PCI bus connection

Management extension hardware

Wake on LAN header

Fan rotation monitoring

M/B voltage and temperature monitoring

CPU core temperature monitoring

Fan control function

Other features

BIOS : 2Mbit Flash ROM (include BIOS, Video BIOS, startup Sony logotype, startup Sony Sound)

Plug and Play compatible

Advanced Power Management (APM 1.2)

Windows 2K support

Suspend to RAM support

Power supply fan control support

ACPI 1.0, support to S0, S1, S3, S4 and S5 power states

Global State/Sleep State	CPU state	Note	Support
G0/S0	C0	Working	Yes
G1/S1	C1	Sleep(no system context is lost)	Yes
G1/S2	C2	Sleep(CPU, cache context is lost)	No
G1/S3		Suspend to RAM(CPU, cache context is lost)	Yes
G1/S4		Suspend to disk	No
G2/S5		Soft off(Power off, no context is saved)	Yes
G3/-		No Power(AC fail)	Yes

SECTION 4
PROGRAMS FOR SERVICE

4-1. DIAGNOSTICS FOR SERVICE

4-1-1. General

The diagnostic programs (Diag.) for service are all supplied with FD.
The Diag. for service uses the QA Plus/Factory and it can test the mother board, CPU, memory, FDD, HDD, and CD-ROM or DVD-ROM. After it started up, the test is conducted automatically in an interactive style.
Additional use of exclusive Diag. disk can test the LCD, memory stick, and PC card in the same manner.
However, these programs do not support the extension boards (such as FAX MODEM board).

4-1-2. Start-up

Set the start disk (first disk) of Diag. for service in the FDD, and start up the MS-DOS.
After start, the programs on the first disk are automatically installed.
Then, install the programs on the second disk following the instruction given on the screen.
After making sure that the program installation is finished and the model selection screen appears, remove the Diag. disk for service.
Before starting the test, set a formatted 1.44 M floppy disk without write protection and a CD-ROM that can be recognized from the MS-DOS in respective drives.
Then, following the screen messages, execute the tests in order.
As the Diag. programs are installed on the RAM Disk, they are cleared when the power is turned off after the test completed.

4-1-3. Test Items

• Parallel LPT1, Serial COM1, Hard Disk
These are tested automatically.

• Floppy Disk A
(1) Random Seek/Verify
The test is conducted automatically.
(2) Write Protect Test
When "Insert write protected formatted diskette" is displayed on the screen, remove the FD once, and set the write protect notch, then reinsert the FD into FDD and select Continue".
(3) Disk Change Test
When "Remove scratch diskette from floppy drive" is displayed on the screen, remove the FD from FDD and select "Continue". Then, when "Re-insert scratch diskette into floppy drive" is displayed, reset the write protect notch and reinsert the FD, then select "Continue".

• Base Memory, Extended Memory
These are tested automatically.

• Audio Speaker Test
Confirm beep sounds from the speaker, then when "Did you hear the speaker?" is displayed, select "Yes".

• Video, Keyboard, Sys Information, CD-ROM, DVD-ROM
These are tested automatically.

4-1-4. Test Result

At the completion of test, "PASS" (on green screen) or "FAIL" (on red screen) is displayed.
If "FAIL" is displayed, refer to the log file through the operation of "E:\> type L630.log". The item with "F" in the flag field indicates a failure.

[Example]

```
0700:210:01  ;     ¦ Starting CPU tests
0700:210:01        ¦ flag and register test
0700:210:01        ¦ math test
0700:211:01  F     ¦ shift and rotate test
             ↑
          Flag field
```

4-1-5. Memory Stick Test

Note: For this test, a memory stick is required additionally.
This program reads the BOOT block of Memory Stick.
1. If the BOOT block reading is successful, normal termination is made.
2. If the BOOT block reading failed, abnormal termination is made.

After the test finished, the log file is created (file name: coraltst.log).

Test procedure

1. Start the test program.
   <<Monitor display>>
   PCI MemoryStick Test Program Version 1.00
   Insert Memory Stick, please.

2. Insert the Memory Stick.
   Upon insertion, "Thank you" is displayed.
   Then, the test is conducted.

   <<Monitor display>>
   PCI MemoryStick Test Program Version 1.00
   Insert Memory Stick, please. OK
   Model Name :MEMORYSTICK 4M 8K
   Remove Memory Stick, please.

3. Remove the Memory Stick.
   The test program ends.

   <<Monitor display>>
   PCI MemoryStick Test Program Version 1.00
   Insert Memory Stick, please. OK
   Model Name :MEMORYSTICK 4M 8K
   Remove Memory Stick, please. OK
   ****
   * Memory Stick Test Report *
   * Memory Stick I/F Controller GOOD!! *
   ****
   Test End

The following shows display examples of test results.

<<Example: Normal termination>>
In the case of 4M Memory Stick

```
PCI MemoryStick Test Program Version 1.00
Insert Memory Stick, please.   OK
Model Name       :MEMORYSTICK   4M   8K
Remove Memory Stick, please.   OK
************************************************
*  Memory Stick Test Report                    *
*     Memory Stick I/F Controller GOOD!!       *
************************************************
Test End
```

<<Example: Abnormal termination>>
(1) Non MS Device

```
************************************************
*  Memory Stick Test Report                    *
*     ERROR:  MS I/F Controller can't Find!!   *
************************************************
Test End
```

(2) Rear Error

```
************************************************
*  Memory Stick Test Report                    *
*     ERROR:  BootBlock Rear Error!!           *
************************************************
Test End
```

(3) Operating Error

```
************************************************
*  Memory Stick Test Report                    *
*     WARNING ERROR:  Operator aborted!!       *
************************************************
Test End
```

4-1-6. LCD Test

1. Start up the Windows98.
2. Insert the service diag. disk for LCD.
3. Click [Start] → Select [Run], then enter "A: LCD" and press OK.
   The LCD test will start, then perform operation following the screen message.
4. "Press ESC key when Ready to start" is displayed, then press [ESC] key.
5. "After confirming LED, Press Enter key" is displayed, then after confirming that the second top red LED on the right side of LCD (:mail receiving information lamp) lights up, press [Enter] key to turn off the red LED.
6. Press [Enter] key to proceed to the next step.
7. The background becomes green and a display frame appears fully on the screen. After confirming that the screen does not wobble extremely, press [Enter] key.
8. The background becomes white. After confirming that uneven brightness or a black point (skipped dot) is not found, press [Enter] key.
9. The background becomes black. After confirming that a luminance point (bright dot) can be seen, press [Enter] key.
10. The background colors vary from white to black successively in upward direction of the screen. After confirming the gradation, press [Enter] key.
11. "Output Left" is displayed, and after confirming that the sounds are outputted from the left speaker, press [Enter] key.
12. "Output Right" is displayed, and after confirming that the sounds are outputted from the right speaker, press [Enter] key.
13. "Opening MCI Device..." is displayed, and after confirming that the MIDI file is played back, press [Enter] key.
14. "Prepared to Suspend" is displayed, and press the Standby key ( ) on the keyboard to activate the Standby (Suspend) mode. After confirming that the Power lamp ( ) changes from green to orange, press [Enter] key to return to the Test mode.
15. Press [Enter] key, and "Press ESC key (Return to the Beginning)" is then displayed.
    To conduct the test again, press [ESC] key.
    To quit the test, press [Pause] key.

4-1-7. PC Card Test

Note: For this test, the following card bus socket tester is required additionally.
Name:PCC TEST450 (PCMCIA SOCKET TESTER)
made by SYCARD TECHNOLOGY

1. Connect the card bus header "Card Bus" (attached) to the PCC TEST450.
2. Insert the service diag. disk for PC card into FDD.
3. Start up the PC while pressing the [Delete] key to open the Setup screen.
4. Select "PNP AND PCI SETUP", and for both "Slot 1 IRQ" and "Slot 2 IRQ" items, change from "Auto" to "NA" using [Pagedown] key.
5. Press ESC key to select "SAVE & EXIT SETUP" and select "Y" and press the Enter key.
6. After the contents of disk were read, "PLEASE INSERT PCC TEST CARD" is displayed. After confirming that the PCC TEST450 is inserted, press any key. The 32 bit test will start.
7. "PLEASE CHANGE FROM "CARD BUS" TO "16 BIT"" is displayed, then replace the card bus header with that of "PC ard 16" (attached) and press any key. The 16 bit test will start.
8. The ZV port test is conducted successively, and if all items are normal, "OK" is displayed.
   Though the ZV port test is displayed, in actual it is not tested.
9. After the test completed, restart the PC and return the "Slot 1 IRQ" and "Slot 2 IRQ" items to "Auto" using [Pageup] key, then re-save the data.

4-2. BIOS DMI DATA REWRITING METHOD

Preparation:
Insert the Update tool FD into the set, and start the program from the FD. Then, the following screen will appear.

```
----------------------
 MODE SELECT
----------------------
  1 : DATA WRITE
  2 : DATA DISPLAY
  Q : Quit
[1.2Q]?
```

Press [1] for data writing (update), or [2] for data display. To quit the program, press [Q].

Data writing (BIOS/DMI/GUID/Region code, Update)
Note: Do not protect FD against writing.

From the menu screen, select [1]

1. MODEL SELECT menu [MODEL SELECT]
   As the model list is displayed, select the model with the up or down cursor key, or the numeric key [2] (down) or [5] (up), and press the [Enter] key.

2. [SERIAL]
   Enter serial number, and press the [Enter] key.

3. [BIOS UPDATE]
   You will be asked whether the BIOS is updated or not. If CANCEL is selected, the menu returns to <1>.
   Select YES to update the BIOS, or select NO to keep it unchanged, and press the [Enter] key.

4. [DMI WRITE]
   Select whether DMI information is written.
   If CANCEL is selected, the menu returns to <1>.
   Select YES to update the information, or select NO to keep it unchanged, and press the [Enter] key.

5. [GUID WRITE]
   Select whether iLINK GUID is written.
   If CANCEL is selected, the menu returns to <1>.
   Select YES to update the information, or select NO to keep it unchanged, and press the [Enter] key.

6. [DVD CODE WRITE]
   Select whether the region code of DVD-ROM is written.
   If CANCEL is selected, the menu returns to <1>.
   Select YES to update the region code, or select NO to keep it unchanged, and press the [Enter] key.
   DVD CODE WRITE can be performed only 5 times. Please do not write in unless it is necessary.

7. [EXECUTE]
   The menus selected so far are displayed in the INFORMATION window.
   Check them, and select YES if OK, or NO if they are to be changed.

8. Selecting YES allows the data to be written following the program.

9. At successful completion, OK is displayed, and the data writing finished. Then, restart the PC.

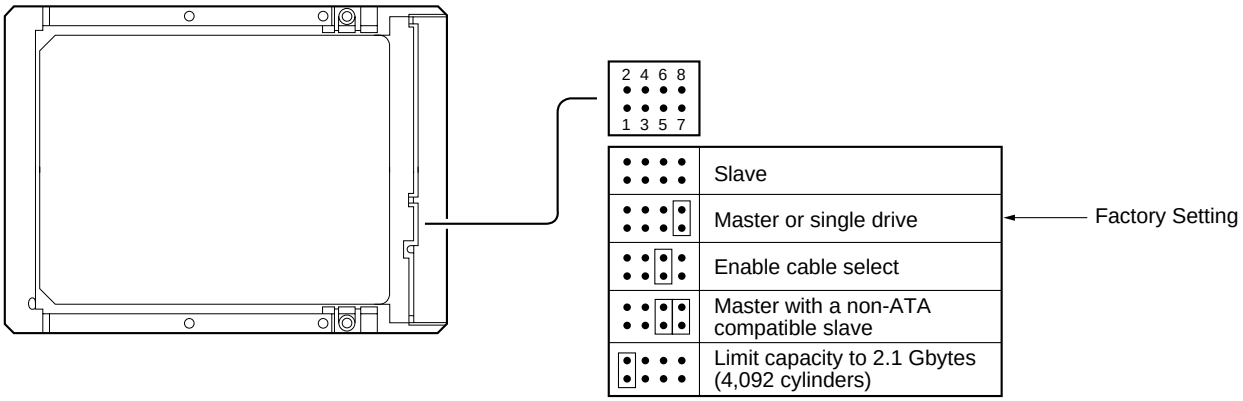
10. From the MODEL SELECT menu[MODEL SELECT], 2: DATA DISPLAY, and make sure that the model name and serial number are displayed correctly, then press [Q] to quit the program.

SECTION 5
SERVICE INFORMATION

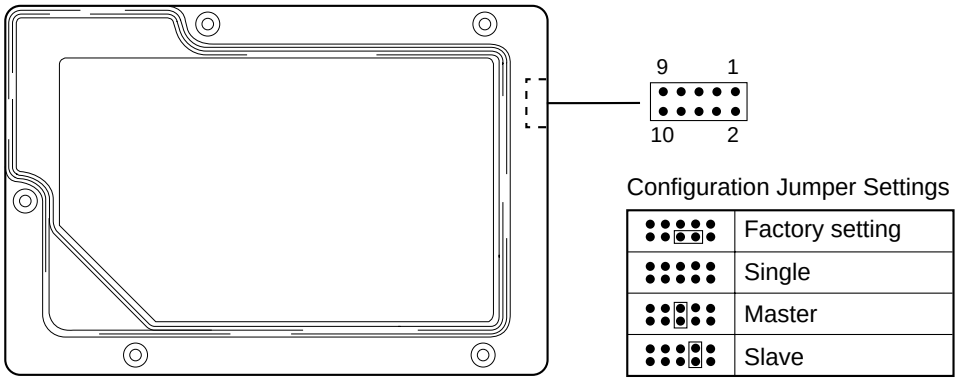
5-1. JUMPER SETTING ON HARD DISK DRIVE

The hard disk drive of service parts can be used without changing factory jumper setting, when it was replaced for service.

Model	Part No.	Maker	Code	Capacity (formatted)
PCV-L630	1-772-641-11	SEAGATE	ST317221A	17 GB

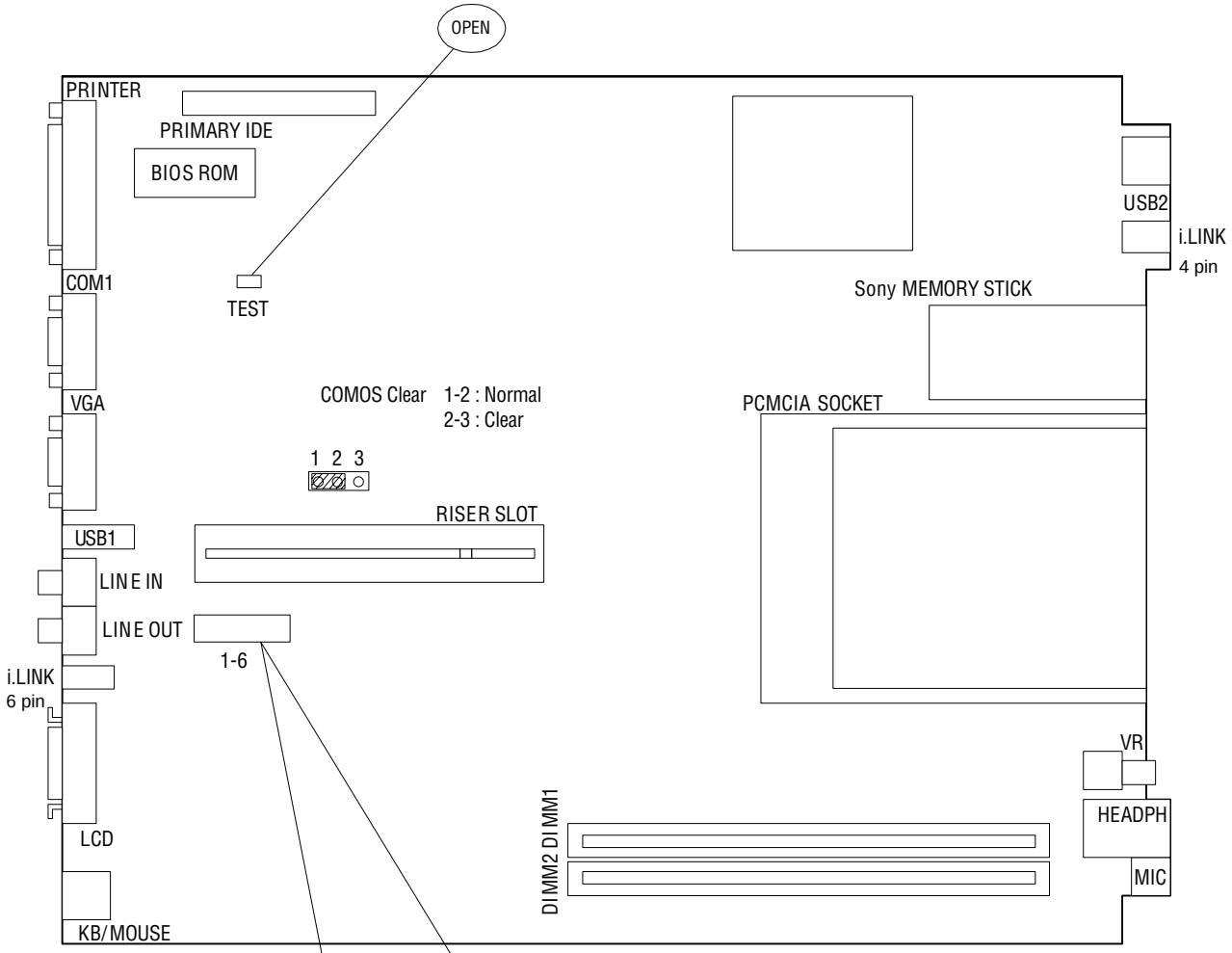


Model	Part No.	Maker	Code	Capacity (formatted)
PCV-L630	1-772-517-11	WESTERN DIGITAL	A0	17 GB



5-2. JUMPER SETTING OF MAIN BOARD

The Main board of service parts can be used without changing factory jumper setting, when it was replaced for service.



CPU Clock Select

1	2	3	4	RATIO
ON	OFF	ON	ON	X3
OFF	OFF	ON	ON	X3.5
ON	ON	OFF	ON	X4
OFF	ON	OFF	ON	X4.5
ON	OFF	OFF	ON	X5
OFF	OFF	OFF	ON	X5.5
ON	ON	ON	OFF	X6
OFF	ON	ON	OFF	X6.5
ON	OFF	ON	OFF	X7
OFF	OFF	ON	OFF	X7.5
ON	ON	OFF	OFF	X8

5	FUNCTION
ON	VGA INT Enable
OFF	VGA INT Disable

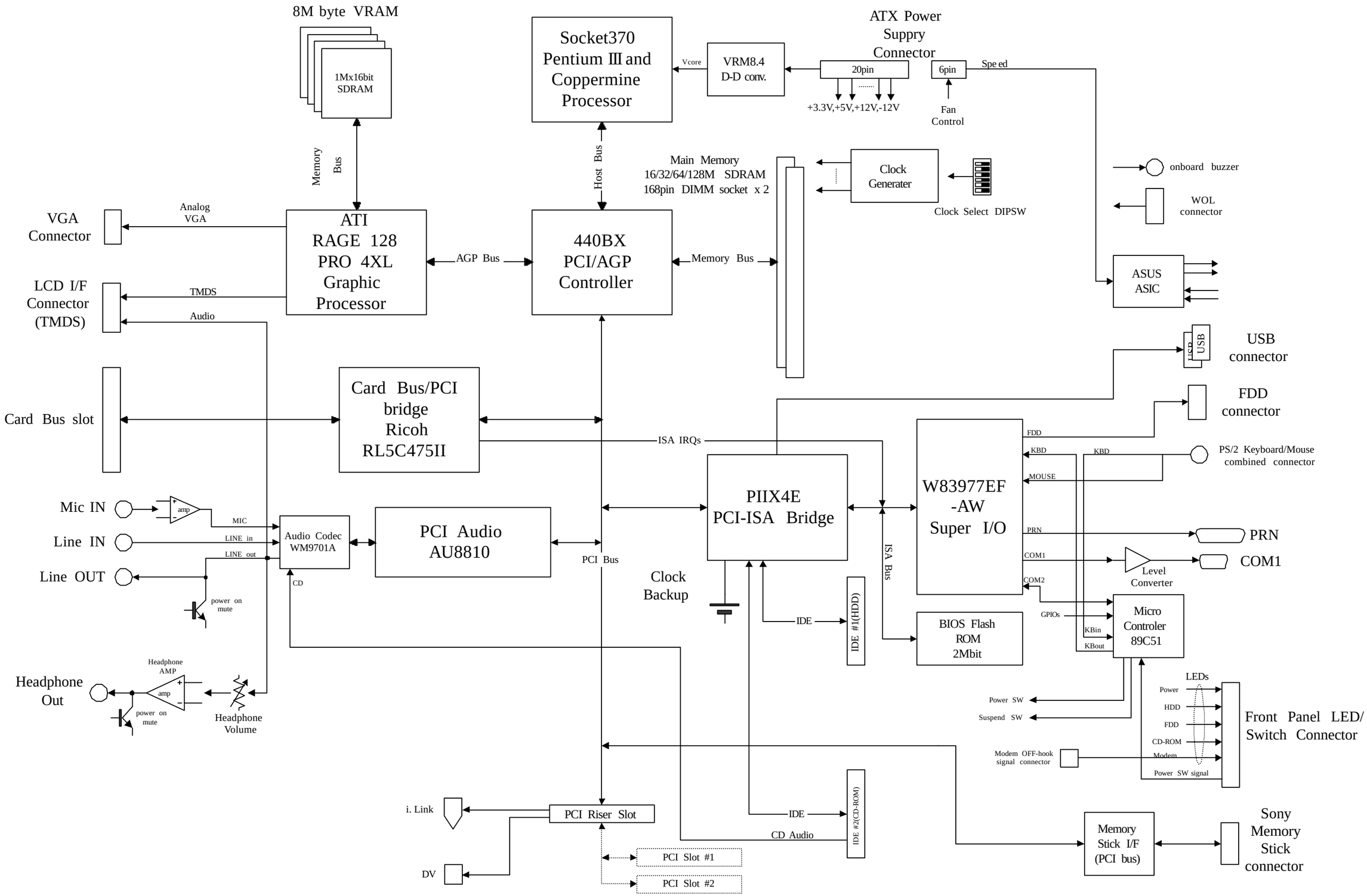
6	FUNCTION
ON	VGA Enable
OFF	VGA Disable

⚠ CAUTION

Do not change the jumper with the power turned on.
Before changing the jumper, turn off the power and disconnect the power cord from the set.

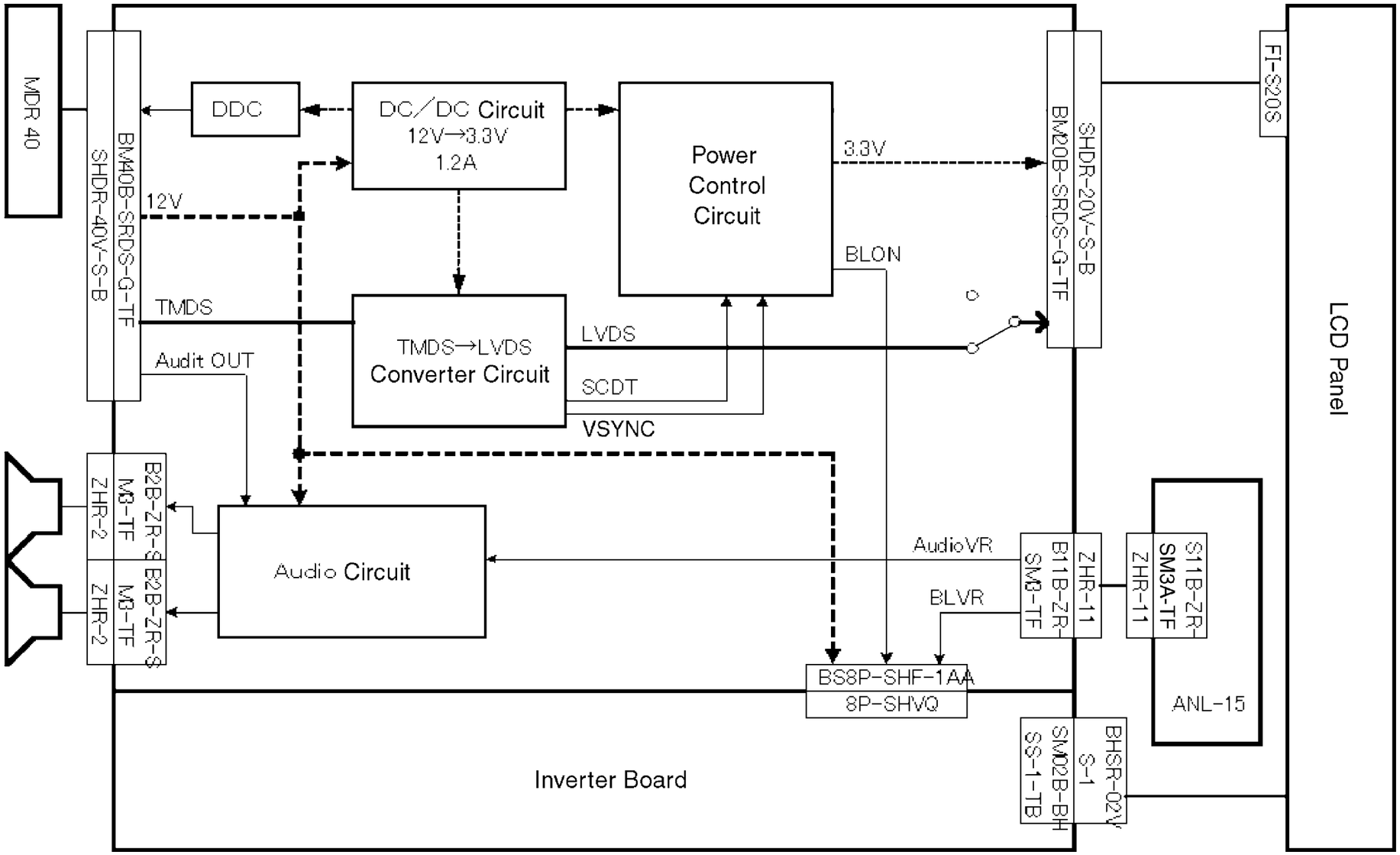
SECTION 6
BLOCK DIAGRAM

6-1. MAIN BOARD



Confidential

6-2. LCD BOARD


MDR 40
BM40B-SRDS-G-TF
SHDR-40V-S-B
DDC
DC/DC Circuit
12V→3.3V
1.2A
Power
Control
Circuit
3.3V
12V
BLON
TMDS
TMDS→LVDS
Converter Circuit
LVDS
SCDT
VSYNC
Audit OUT
BM20B-SRDS-G-TF
SHDR-20V-S-B
FI-S20S
LCD Panel
B2B-ZR-S
ZHR-2
MB-TF
Audio Circuit
AudioVR
BLVR
B11B-ZR-SM3-TF
ZHR-11
S11B-ZR-SM3A-TF
ANL-15
BS8P-SHF-1AA
8P-SHVQ
SM02B-BHSS-1-TB
BHSR-02VS-1
Inverter Board

SECTION 7
FRAME HARNESS

7-1. CONNECTOR LIST

1. Internal connectors

CTRL PWR

Pin	Signal Name
1	Fan M
2	Fan C *
3	3.3V sense
4	Key (NC)
5	Reserved
6	Reserved

* Fan speed control signal. This signal voltage is controlled by H/W monitor chip.

ATXPWR

Pin	Signal Name
1	+3.3 V
2	+3.3 V
3	Ground
4	+5 V
5	Ground
6	+5 V
7	Ground
8	PWRGD (Power Good)
9	+5 VSB
10	+12 V
11	+3.3 V
12	-12 V
13	Ground
14	PS-ON# (power supply remote on/off control)
15	Ground
16	Ground
17	Ground
18	N.C.
19	+5 V
20	+5 V

WOL_CON

Pin	Signal Name
1	+5 VSB
2	Ground
3	WOL signal

FRONT PANEL

Pin No.	Signal Name
1	+5V
2	LED(CD-ROM) cathode
3	LED(FDD) cathode
4	LED(HDD) cathode
5	LED(MODEM) cathode
6	Reserved
7	LED3(Standby RED) anode
8	LED4(Power GREEN) anode
9	POWER SW
10	GND

FLOPPY

Pin	Signal Name	Pin	Signal Name
1	+5V	2	INDEX (Index)
3	+5V	4	DRIVE_SELECT_0#
5	+5V	6	DSKCHG# (Diskette Change)
7	N.C.	8	READY#
9	HD	10	MOTOR_ON# (Motor Enable)
11	N.C.	12	DIRECTION# (Stepper Motor Direction)
13	MODE_SELECT#	14	STEP# (Step Pulse)
15	Ground	16	WRITE_DATA# (Write Data)
17	Ground	18	WRITE_GATE# (Write Gate)
19	Ground	20	TRACK_00# (Track 0)
21	Ground	22	WRITE_PROTECT#(Write Protect)
23	Ground	24	READ_DATA# (Read Data)
25	Ground	26	SIDE_ONE_SELECT#(Side 1 select)

Primary IDE

Pin	Signal Name	Pin	Signal Name
1	Reset IDE	2	Ground
3	Data 7	4	Data 8
5	Data 6	6	Data 9
7	Data 5	8	Data 10
9	Data 4	10	Data 11
11	Data 3	12	Data 12
13	Data 2	14	Data 13
15	Data 1	16	Data 14
17	Data 0	18	Data 15
19	Ground	20	Key
21	DDRQ0	22	Ground
23	I/O Write#	24	Ground
25	I/O Read#	26	Ground
27	IOCHRDY	28	P_ALE (Cable Select pullup)
29	DDACK0#	30	Ground
31	IRQ 14	32	Reserved
33	Address 1	34	Reserved
35	Address 0	36	Address 2
37	Chip Select 1P#	38	Chip Select 3P#
39	Activity#	40	Ground

SECONDARY IDE

Pin No.	Signal Name	Pin No.	Signal Name
1	LOUT	2	ROUT
3	LRTN(AGND)	4	RRTN(AGND)
5	HRST	6	HD08
7	HD07	8	HD09
9	HD06	10	HD10
11	HD05	12	HD11
13	HD04	14	HD12
15	HD03	16	HD13
17	HD02	18	HD14
19	HD01	20	HD15
21	HD00	22	DMARQ
23	GND	24	HIOR#
25	HIOW#	26	GND
27	HIORDY	28	DMACK#
29	HIRQ	30	HIOCS16#
31	HA01	32	PDIAG#
33	HA00	34	HA02
35	HCSO#	36	HSC1#
37	DASP#	38	+5V
39	+5V	40	+5V
41	+5V	42	+5V
43	GND	44	GND
45	GND	46	GND
47	CSEL	48	GND
49	RESERVED	50	DIGITAL OUT

RISER SLOT

Pin	SideB Signal Name	SideA Signal Name	Pin	SideB Signal Name	SideA Signal Name
1	-12	TRST#	55	AD05	AD04
2	TCK	+12V	56	AD03	GND
3	GND	TMS	57	GND	AD02
4	TDO	TDI	58	AD01	AD00
5	+5V	+5V	59	+5V(I/O)	+5V(I/O)
6	+5V	INTA#	60	ACK64#	REQ64#
7	INTB#	INTC#	61	+5V	+5V
8	INTD#	+5V	62	+5V	+5V
9	PRSNT1#	REQ3#			
10	GNT3#	+5V(I/O)			
11	PRSNT2#	PCLK3			
12	GND	GND			
13	GND	GND			
14	*1394RST#	*CLK2			
15	GND	RST#			
16	CLK1	+5V(I/O)			
17	GND	*GNT1#			
18	*REQ1#	GND			
19	+5V(I/O)	Reserved			
20	AD31	AD30			
21	AD29	*GNT2#			
22	GND	AD28			
23	AD27	AD26			
24	AD25	GND			
25	*REQ2#	AD24			
26	C/BE3#	IDSEL			
27	AD23	+3.3V			
28	GND	AD22			
29	AD21	AD20			
30	AD19	GND			
31	+3.3V	AD18			
32	AD17	AD16			
33	C/BE2#	+3.3V			
34	GND	FRAME#			
35	IRDY#	GND			
36	+3.3V	TRDY#			
37	DEVSEL#	GND			
38	GND	STOP#			
39	LOCK#	+3.3V			
40	PERR#	SDONE			
41	+3.3V	SBO#			
42	SERR#	GND			
43	+3.3	PAR			
44	C/BE1#	AD15			
45	AD14	+3.3V			
46	GND	AD13			
47	AD12	AD11			
48	AD10	GND			
49	GND	AD09			
50	CONNECTOR KEY	CONNECTOR KEY			
51	CONNECTOR KEY	CONNECTOR KEY			
52	AD08	C/BE0#			
53	AD07	+3.3V			
54	+3.3V	AD06			

--NOTE–

1) "#" means active Low signals.

2) "" means that the signal is different from standard PCI.*

3) GNT1#, REQ1# and CLK1 are signals for PCI_slot 1.

4) GNT2#, REQ2# and CLK2 are signals for PCI_slot 2.

5) GNT3#, REQ3# and CLK3 are signals for IEEE-1394 I/F.

6) 1394RST# is signal for IEEE-1394 I/F.

F/R 1394C

Pin	Signal Name
1	Ground
2	TPA+
3	TPA-
4	TPB+
5	TPB-
6	Ground

SLOT1 OT1

too complex to write

2. External Connectors

Printer

Pin	Signal Name	Pin	Signal Name
1	Strobe#	14	Auto Feed#
2	Data bit 0	15	Fault#
3	Data bit 1	16	INIT#
4	Data bit 2	17	SLCT IN#
5	Data bit 3	18	Ground
6	Data bit 4	19	Ground
7	Data bit 5	20	Ground
8	Data bit 6	21	Ground
9	Data bit 7	22	Ground
10	ACK#	23	Ground
11	Busy	24	Ground
12	Error	25	Ground
13	Select		

Serial (COM1)

Pin	Signal Name
1	DCD
2	Serial In #
3	Serial Out #
4	DTR#
5	Ground
6	DSR
7	RTS
8	CTS
9	RI

KB/MOUSE

Pin	Signal Name
1	KBD DATA
2	MOUSE DATA
3	Ground
4	+5 V (fused)
5	KBD CLOCK
6	MOUSE CLOCK

LCD

Pin	Signal Name	Pin	Signal Name
1	POWER GND	21	POWER GND
2	POWER +12V	22	POWER +12V
3	MSG LED	23	Tx2+(TMDS) / Tx0-(LVDS)
4	Tx2GND / Tx0GND	24	Tx2-(TMDS) / Tx0+(LVDS)
5	Tx1+(TMDS) / Tx1-(LVDS)	25	Tx1GND / Tx1GND
6	Tx1-(TMDS) / Tx1+(LVDS)	26	Tx0+(TMDS) / Tx2-(LVDS)
7	Tx0GND / Tx2GND	27	Tx0-(TMDS) / Tx2+(LVDS)
8	TxC+(TMDS) / TxC-(LVDS)	28	TxCGND / TxCGND
9	TxC-(TMDS) / TxC+(LVDS)	29	DETECT0#
10	DETECT1#	30	(reserved)
11	(reserved)	31	(reserved)
12	Audio L out	32	Audio GND
13	Audio R out	33	(reserved)
14	(reserved)	34	(reserved)
15	DDCSD	35	DDCSC
16	(reserved)	36	(reserved)
17	(reserved)	37	(reserved)
18	POW_LED	38	BLON
19	POWER +12V	39	POWER +12V
20	POWER GND	40	POWER GND

LINE IN

Pin	Signal Name
Sleeve	Ground
Tip	Audio Left In
Ring	Audio Right In

MIC (Front)

Pin	Signal Name
Sleeve	Ground
Tip	Mono In
Ring	Electret Bias Voltage

HEADPHONE (Front)

Pin	Signal Name
Sleeve	Ground
Tip	Left Out
Ring	Right Out

iLINK 6P

Pin No.	Signal Name
1	VP
2	VG
3	TPB-
4	TPB+
5	TPA-
6	TPA+

iLINK 4P (Front)

Pin No.	Signal Name
1	TPB-
2	TPB+
3	TPA-
4	TPA+

USB (front and rear side)

Pin	Signal Name
1	Power
2	USBP0# [USBP1#]
3	USBP0 [USBP1]
4	Ground

LINE OUT

Pin	Signal Name
Sleeve	Ground
Tip	Audio Left Out
Ring	Audio Right Out

PCMCIA

Pin No.	Signal Name	Pin No.	Signal Nam
1	GND	2	D3/CAD0
3	D4/CAD1	4	D5/CAD3
5	D6/CAD5	6	D7/CAD7
7	CE1/CCBE0	8	A10/CAD9
9	OE/CAD11	10	A11/CAD12
11	A9/CAD14	12	A8/CCBE1
13	A13/CPAR	14	A14/CPER R
15	WE,PGM/CGNT	16	RDY,BSY,IRQ*INT
17	VCC	18	VPP1
19	A16/CCLK	20	A15/CIRDY
21	A12/CCBE2	22	A7/CAD18
23	A6/CAD20	24	A5/CAD21
25	A4/CAD22	26	A3/CAD23
27	A2/CAD24	28	A1/CAD25
29	A0/CAD26	30	D0/CAD27
31	D1/CAD29	32	D2/RFU
33	WP,IOIS16/CKRUN	34	GND
35	GND	36	CD1/CCD1
37	D11/CAD2	38	D12/CAD4
39	D13/CAD6	40	D14/RFU
41	D15/CAD8	42	CE2/CAD10
43	RFSH,VS*1/CVS1	44	IORD/CAD13
45	IOWR/CAD15	46	A17/CAD16
47	A18/RFU	48	A19/CBLOCK
49	A20/CSTOP	50	A21/CDEVSEL
51	VCC	52	VPP2
53	A22/CTRDY	54	A23/CFRAME
55	A24/CAD17	56	A25/CAD19
57	NC/CVS2	58	RESET/CRST
59	WAIT/CSERR	60	INPACK/CREQ
61	REG/CCBE3	62	BVD2,SP/CAUDIO
63	BVD1,STSCHG/C*	64	D8/CAD28
65	D9/CAD30	66	D10/CAD31
67	CD2/CCD2	68	GND

MEMORY STICK

Pin No.	Signal Name
1	GND
2	BS
3	Reserved
4	DIO
5	Reserved
6	INS
7	Reserved
8	MS CLK
9	+3.3V
10	GND

VGA

Pin No.	Signal Name	Pin No.	Signal Name
1	R	2	G
3	B	4	Ground
5	DDC Ground	6	R Ground
7	G Ground	8	B Ground
9	-	10	Ground
11	Ground	12	SDA
13	H sync	14	V sync
15	SCL		

3. Jumper Header

CPU Core:Bus Frequency Multiple (SW)

	1	2	3	4
x3.0	ON	OFF	ON	ON
x3.5	OFF	OFF	ON	ON
x4.0	ON	ON	OFF	ON
x4.5	OFF	ON	OFF	ON
x5.0	ON	OFF	OFF	ON
x5.5*	OFF	OFF	OFF	ON
x6.0	ON	ON	ON	OFF
x6.5	OFF	ON	ON	OFF
x7.0	ON	OFF	ON	OFF

* is default setting

VGA Enable

Enable/Disable the onboard VGA
combination of jumper caps :

SW6	VGAENB
Enable *	ON
Disable	OFF

*is default setting

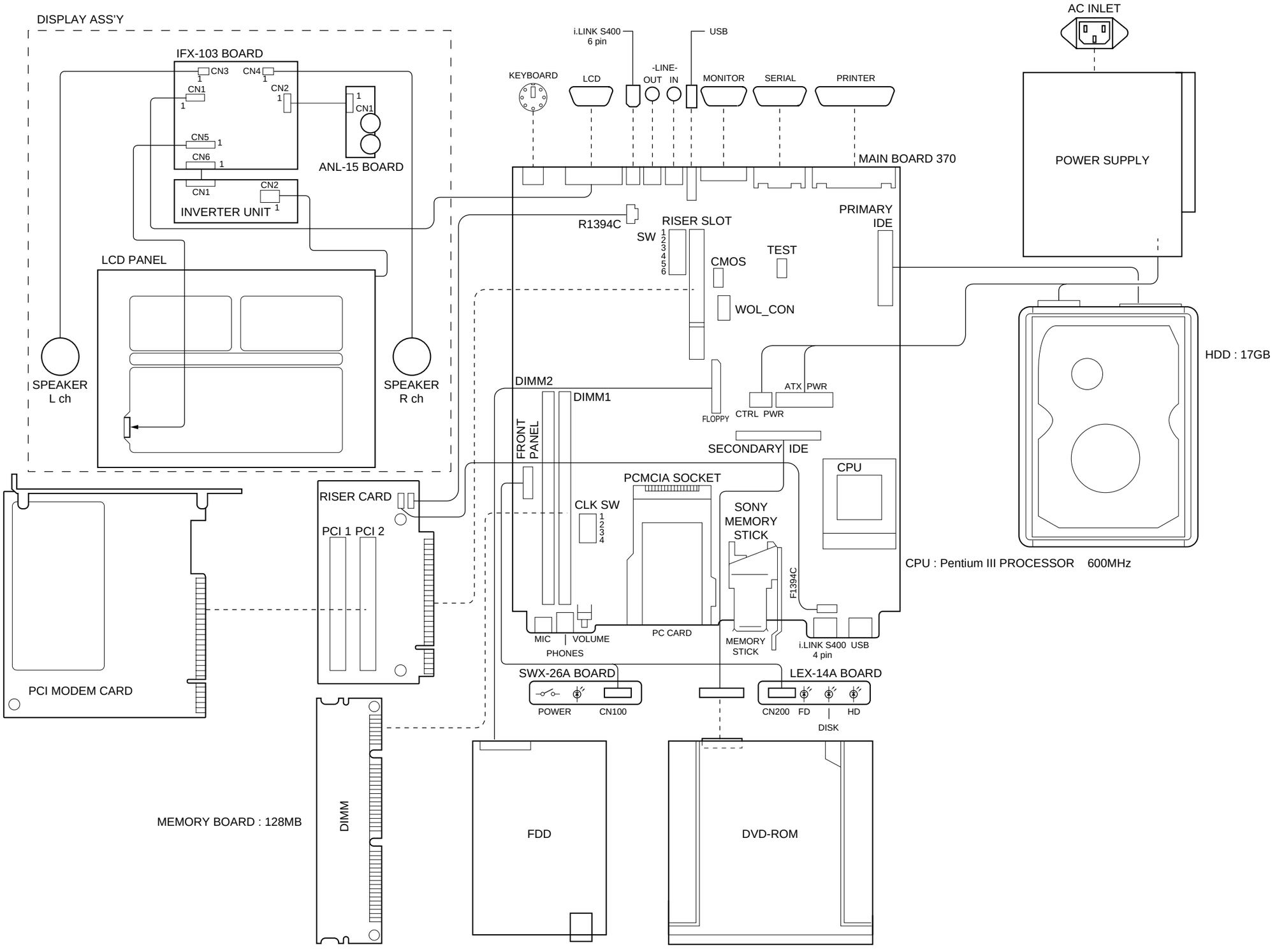
CMOS Clear

Clear the RTC data combination of jumper caps :

	CMOSCLR
Normal*	1-2
Clear	2-3

* is default setting

7-2. FRAME HARNESS DIAGRAM

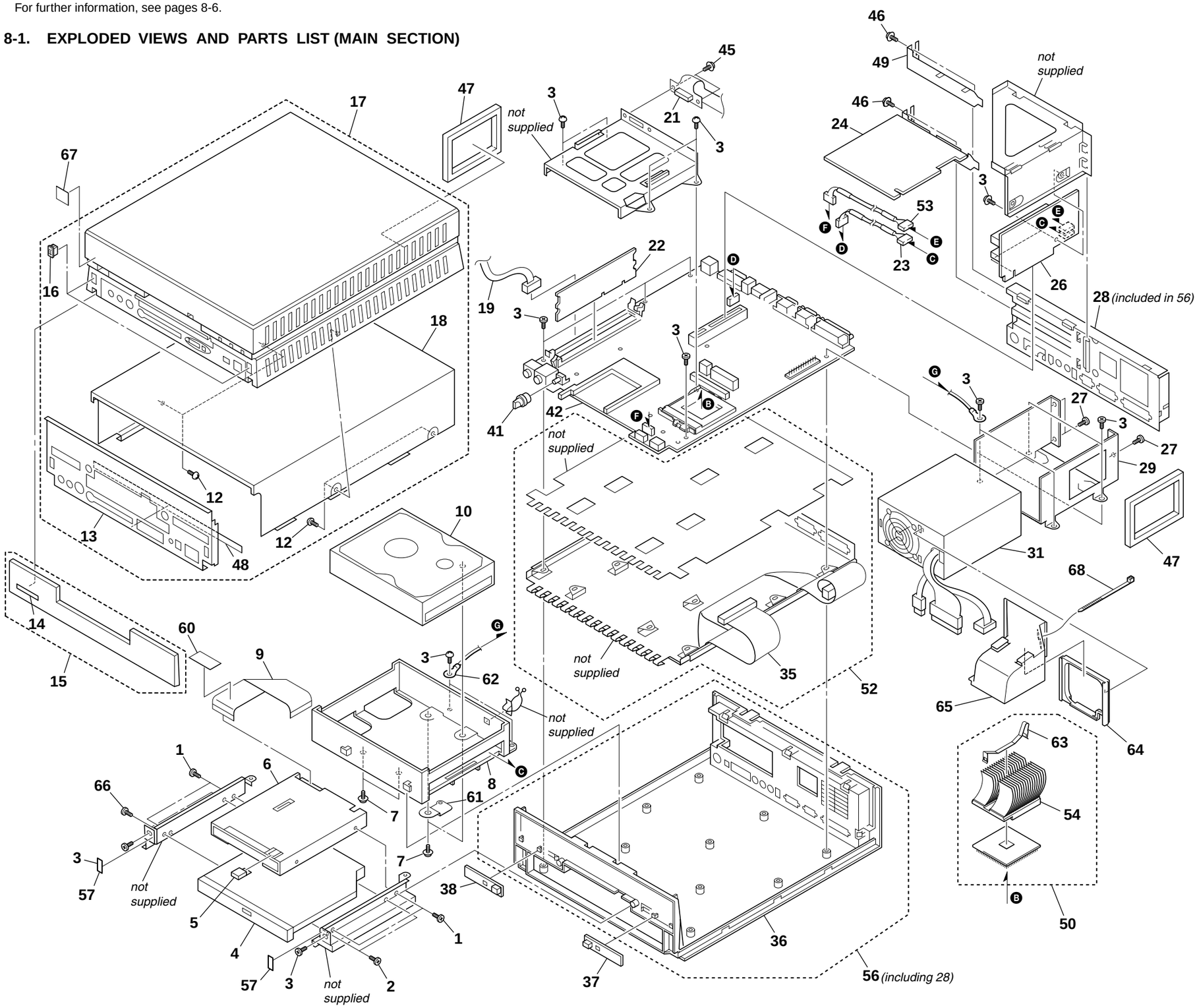


SECTION 8
REPAIR PARTS LIST

NOTE:
- The parts listed here are for service, and therefore they may be different from the parts shown in circuit diagrams or used in the set.
- The category “O” in S/P column denotes that the parts are not always stocked.
- The parts with ♦ marking are stocked at the Division.
- The parts with ■ marking are attached with a barcode label. For further information, see pages 8-6.

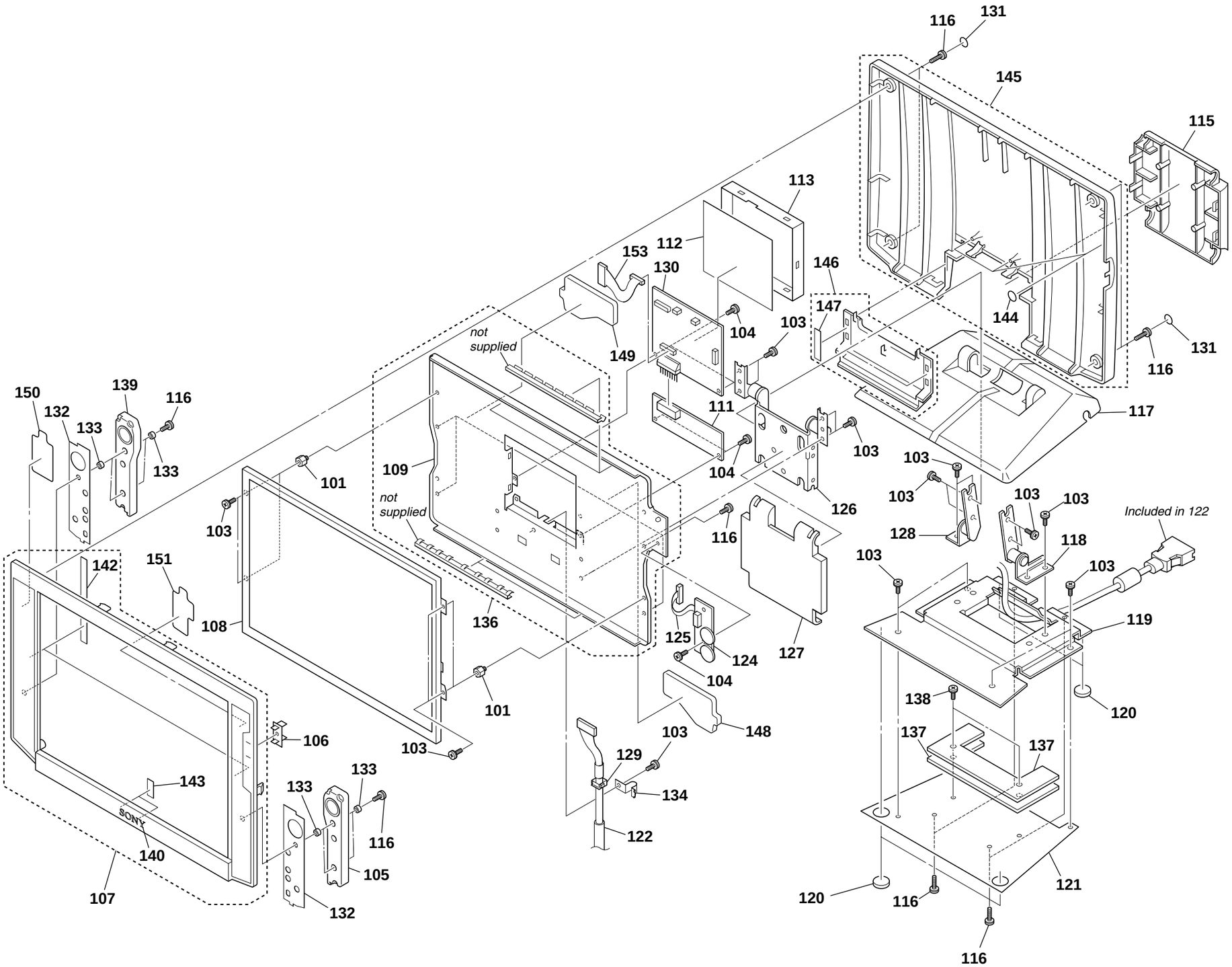
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

8-1. EXPLODED VIEWS AND PARTS LIST (MAIN SECTION)



S/P	Ref. No.	Part NO.	Description	Remark
S	1	7-621-259-15	SCREW +P 2.6X3	
S	2	7-627-554-07	SCREW, PRECISION +P 2X2.2	
S	3	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	
S	♦ 4	1-772-388-14	■ DRIVE, DVD-ROM	
S	5	4-641-538-02	BUTTON, FDD	
S	♦ 6	1-772-028-11	■ DRIVE, FDD	
S	7	4-641-565-01	SCREW, HDD	
O	8	4-641-564-12	CASE, HDD	
S	9	1-959-660-31	HARNESS, FFC (FDD)	
S	♦10	A-8046-741-A	■ HDD (17GB) ASSY (S) (HDD/S-U8)	
S	12	7-685-645-71	SCREW +BVTP 3X6 TYPE2 IT-3	
O	13	4-641-540-02	SHIELD, FRONT	
S	14	4-969-961-11	EMBLEM (NO.4), SONY	
S	15	X-4622-136-2	DOOR ASSY	
O	16	4-641-570-01	MAGNET	
S	17	X-4622-356-1	COVER ASSY, TOP	
O	18	4-641-541-01	SHIELD, TOP COVER	
S	19	1-959-659-11	HARNESS (LED)	
S	21	1-959-667-11	PWB, FLEXIBLE (SINGLE)	
S	♦22	8-749-017-43	■ IC MC-4516CB646EF-A80	(DIMM:128MB)
S	23	1-959-983-11	HARNESS 1394 (FOR PCV-L)	
S	♦24	1-761-180-11	■ CARD (PCI/U), MODEM	
S	♦26	1-761-321-11	CARD, RISER	
S	27	4-641-567-01	SCREW, PS	
O	28	4-641-534-03	CHASSIS, REAR	
O	29	4-641-568-01	SUPPORT, PS	
⚠S	31	1-468-396-13	■ SWITCHING REGULATOR	
S	35	1-959-661-31	HARNESS (HDD)	
S	36	4-641-535-02	COVER, BOTTOM	
S	♦37	A-8056-206-A	LEX-14A MOUNTED PWB	
S	♦38	A-8056-207-A	SWX-26A MOUNTED PWB	
S	41	4-641-542-01	KNOB, VOLUME	
S	♦42	A-8046-746-A	■ MOTHER BOARD (KA) ASSY (S)	
S	45	7-682-144-01	SCREW +P 3X3	
S	46	7-682-947-01	SCREW +PSW 3X6	
O	47	4-641-776-01	DUCT (OUT)	
S	48	4-642-324-02	GASKET	
S	49	4-643-261-01	SLOT COVER	
S	♦50	A-8046-748-A	CPU (P3/600MHz/370) ASSY (S)	
S	52	X-4622-154-5	SHIELD ASSY, BOTTOM	
S	53	1-959-983-21	HARNESS 1394 (FOR PCV-L)	
O	54	4-646-592-01	HEAT SINK	
S	56	X-4622-385-2	COVER ASSY, BOTTOM	
S	57	4-642-498-01	GASKET, DRIVE HOLDER	
S	60	4-645-590-01	SHEET, FDD	
S	61	4-644-515-01	PLATE, GROUND	
O	62	1-792-245-11	WIRE, GROUND	
O	63	4-646-593-01	CLIP	
O	64	4-646-594-01	GUIDE	
S	65	4-646-595-01	DUCT	
S	66	7-627-553-28	SCREW, PRECISION +P2X2.5	
S	67	4-640-142-02	SEAL, MS98	
S	68	3-701-991-01	BAND	

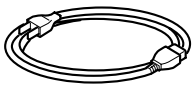
8-2. EXPLODED VIEWS AND PARTS LIST (DISPLAY SECTION)



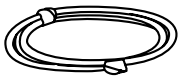
S/P	Ref. No.	Part NO.	Description	Remark
S	101	4-644-481-01	POST	
S	103	7-682-645-01	SCREW +PS 3X4	
S	104	7-621-772-08	SCREW +B 2X3	
S	105	1-529-531-11	SPEAKER UNIT (R)	
S	106	4-641-578-02	LENS	
S	107	X-4622-469-1	COVER (15) ASSY, FRONT	
S	♦ 108	A-8046-743-A	■ LCD (15 XGA) ASSY (S)	
O	109	4-644-444-02	CHASSIS	
S	111	1-761-298-12	INVERTER UNIT	
O	112	4-644-464-01	SHEET, SHIELD	
O	113	4-644-463-02	COVER, SHIELD	
S	115	4-641-586-02	COVER (REAR), ARM	
S	116	7-685-547-14	SCREW +BTP 3X10 TYPE2 N-S	
S	117	4-641-560-02	COVER, BASE	
S	118	X-4622-465-1	HINGE ASSY (R)	
O	119	4-641-561-01	PLATE, BASE	
S	120	4-641-625-01	FOOT, RUBBER	
O	121	4-644-491-01	PLATE, BOTTOM	
S	122	1-792-497-11	CABLE (LCD)	
S	♦ 124	A-8056-168-A	ANL-15 MOUNTED PWB	
S	125	1-960-523-11	HARNESS (VR)	
S	126	X-4622-467-1	PLATE ASSY, ARM	
S	127	4-641-585-02	COVER (FRONT), ARM	
S	128	X-4622-466-1	HINGE ASSY (L)	
O	129	4-641-552-01	SADDLE, LOCK EDGE	
S	♦ 130	A-8056-734-A	IFX-103 MOUNTED PWB (B)	
S	131	4-644-474-01	COVER, SCREW	
S	132	4-644-500-01	INSULATOR (15)	
S	133	4-644-473-01	ABSORBER	
O	134	4-644-445-01	CLAMP, CABLE	
O	136	A-8046-093-B	CHASSIS ASSY, SUB	
O	137	4-644-443-01	WEIGHT	
S	138	7-682-648-01	SCREW +PS 3X8	
S	139	1-529-530-11	SPEAKER UNIT (L)	
S	140	4-045-165-11	EMBLEM (NO.6), SONY	
S	142	4-645-543-01	SHEET (L95), VIBRATION PROOF	
S	143	4-645-545-01	SHEET (L15), VIBRATION PROOF	
S	144	4-642-157-01	COVER, SCREW	
S	145	X-4622-583-1	COVER ASSY, REAR	
S	146	X-4622-584-1	COVER ASSY, CENTER	
S	147	4-645-544-01	SHEET (L35), VIBRATION PROOF	
S	148	4-645-450-01	CUSHION (R), HARNESS	
S	149	4-645-567-01	CUSHION (L), HARNESS	
S	150	4-645-774-02	SHIELD (L), EMI	
S	151	4-645-775-02	SHIELD (R), EMI	
S	153	1-960-417-21	HARNESS (LCD)	

8-3. ACCESSORIES AND PARTS LIST

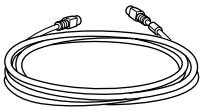
201
POWER CORD



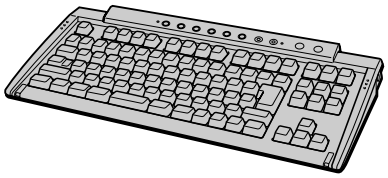
202
TELEPHONE CORD



203
CABLE

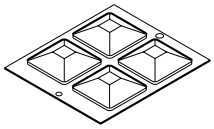


204
KEYBOARD

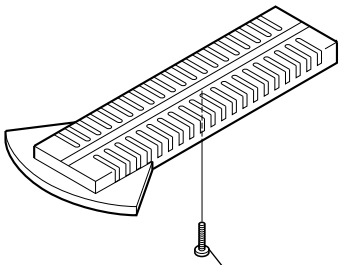


205
MOUSE

206
FOOT

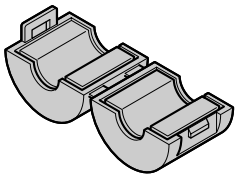


207
STAND

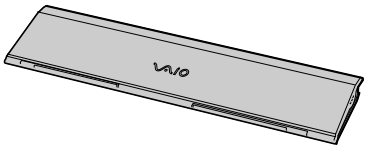


212
SCREW

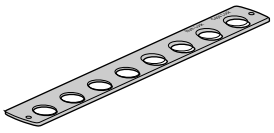
208
FERRITE CORE



213
COVER



214
PLATE



S/P	Ref. No.	Part No.	Description	Remark
⚠S	201	1-777-786-11	CORD, AC	
S	202	1-782-207-11	CABLE, MODEM	
S	203	1-790-717-21	CORD, DIN CONNECTION (KEYBOARD)	
S	204	1-772-010-21	■ KEYBOARD	
S	♦ 108	1-772-207-11	WHEEL MOUSE (PS/2)	
S	206	4-641-545-01	FOOT	
S	207	4-641-569-01	STAND	
S	208	1-500-616-21	FILTER, CLAMP (FERRITE CORE)	
S	212	7-685-647-71	SCREW +BVTP 3X10 TYPE2 IT-3	
S	213	4-641-663-01	COVER	
S	214	4-641-664-01	PLATE	
S		4-646-001-01	USER GUIDE	
S		4-646-002-01	READ ME FIRST	

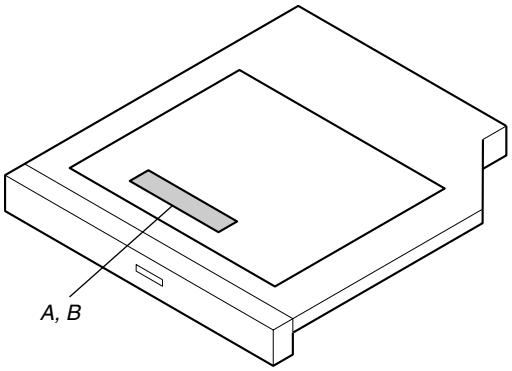
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

8-4. BARCODE LABEL

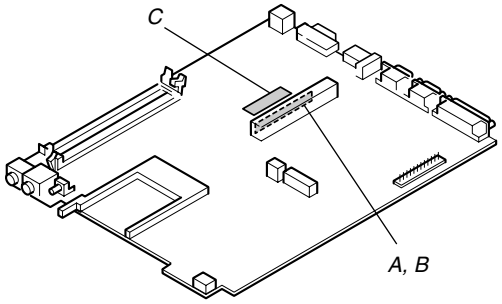
A : Part No.
B : Serial No.
C : Revision No.
D : Maker Barcode 1
▭ : Barcode

How to see barcode label
The shaded barcode label is used for repair data.

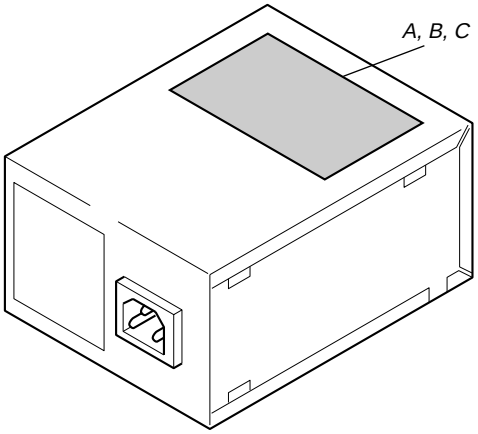
[DVD-ROM]



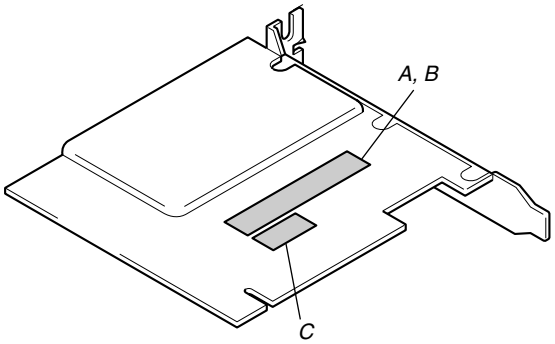
[MAIN BOARD]



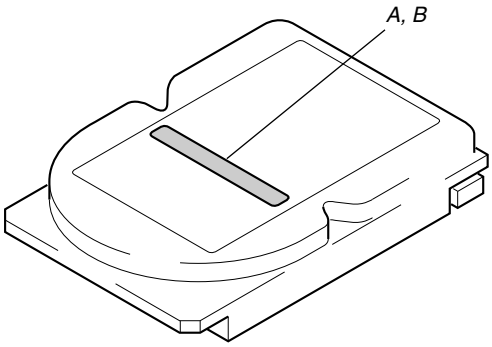
[POWER SUPPLY]



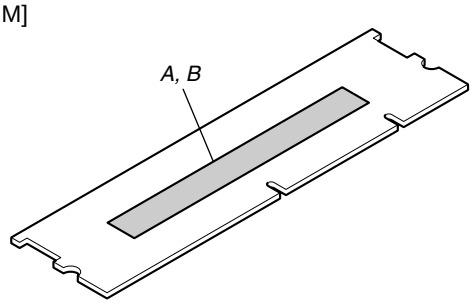
[MODEM CARD] (PCI/U)



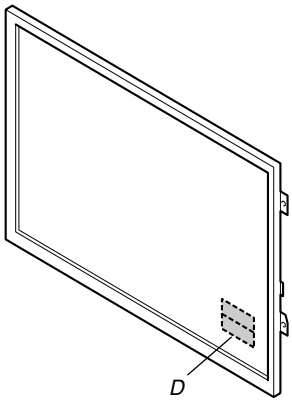
[HDD]



[DIMM]



[LCD]



[KEYBOARD]